OHIO CULTIVATOR.

A Monthly Journal for the Farm and the Family.

S. D. HARRIS, W. B. FAIRCHILD, } Editors. Terms, { FIFTY CENTS A YEAR. In Advance.

Vol. XXII. CLEVELAND, FEBRUARY, 1866. No. 2.

The Horticultural Department.

HINTS FOR THE SEASON.

Grass Plats, such as door yards, lawns, &c., may be littered over with long manure, or stable compost for a surface fertilizer, to lie upon the grass until the spring fairly opens, when it is to be raked off, leaving the grass to take a fine start, as it will be sure to do. This is the more necessary this winter in the absence of snow, which acts as a friendly blanket to keep off the cold winds and protect the grass from sudden and extreme changes of temperature.

Rose Bushes should be looked to, and if they are not in winter covers of straw or other protection, may be pruned into the proper shape and a good mulch of stable compost laid about the roots to give off its fertilizing qualities to the soil so the plants may have an early breakfast in the spring when they wake up for growth. Roses are hearty feeders and they need their feed very early in the season to enable them to send out their great buds for early blooming.

The Grape Vines may be cut any mellow day when the wood is not frozen. Many people put off cutting their grape vines until the sap starts in the spring, by which much of the vital force of the vine runs to waste. The pruning of grape vines should not be delayed beyond the month of February; it is better to cut in November or December.

The Sheep are doing badly this winter, as we learn by the farmers from various quarters, in consequence of the openness of the winter, which gives them access to the ground for foraging. It would seem that no good flock-master would allow his sheep to go at large and spoil their appetite for solid feed, when he must know that such a course will inevitably result in their debility and consequent serious damage. Better confine the sheep to regular winter feed, and avoid this loss.

EARLY BLACKBERRIES.

It is a great object with fruit men to be early in the market to secure the best prices. Concerning certain new varieties of blackberries, we find the following remarks in the Philadelphia *Rural Advertizer*, by Wm. Parry one of the most successful fruit growers of New Jersey:

The inquiry being frequently made as to what is the difference between the *Wilson's Early* and the *Kittatinny* Blackberry, two new varieties that have recently been brought forward with strong recommendations of their good qualities, it may not be improper to state that both are berries of superior excellence, and great acquisitions to our list of small fruits. They resemble each other in many respects; both are large, luscious and very productive; sweet and ready to be eaten as soon as black, and hold their color well after picking, in which several particulars they are much preferable to the New Rochelle. Their principal difference is in the time and manner of ripening, which will adapt them to the wants of different classes of fruit growers.

The Kittattinny has the habit of continuing long in bearing, yielding, its luscious fruits through a period of six to eight weeks. We have eaten of it fresh from the vines on the 30th of August. This property will make it favorite with the amateur and private gardener, who grow a little fruit for family use, and would not desire many bushels of blackberries at one time, and if the garden should be already stocked with New Rochelles, they can easily be rooted out, when the *Kittatinnies*

shall become so well established as to furnish a full supply of better fruit for house use.

The Wilson's Early has the habit of ripening its crop mainly together, and is principally over in two weeks, and before the height of blackberries come on; like the early pea, its whole crop is gathered at a few pickings, while the price rules high, therefore it does not come in competition with any other Blackberries, but is ahead of them all in market, and brings more money. Fruit growers who already have as many acres of the Rochelle as they can properly attend to would not want many more ripening at the same time, yet they might with great propriety add another field of an earlier variety to come ahead and precede the New Rochelles in market.

JOHN MITCHELL, of Burlington, N. J., one of the most extensive fruit growers for the Philadelphia and New York markets, had forty acres of the New Rochelles in bearing, and has purchased 1000 plants of *Wilson's Early*, at $1.50 each, to pick in advance of the New Rochelles.

He stated that "the earlier he could get fruit into the market the better; that the first New Rochelles he sent to market brought $30 per chest, (60 quarts, at 50 cts.,) and the last, when peaches and other fruit were plenty, were sold at $3 per chest, yet the expense of picking and transportation to market was as great as on the later as the earlier ripening."

Another fruit grower of this county, who has had ten acres of New Rochelles in bearing for many years, yielding an average annually of $400 per acre, has planted over ten acres of the *Wilson's Early*, to precede the New Rochelles in market and thereby give continued employment to the pickers, men and teams in gathering and hauling berries to market, from the height of the Philadelphia Rashberry to the height of the New Rochelle Blackberry, just the time when fruit is most scarce in market and brings the most money. Thus may we be abundantly supplied for three months with three kinds of berries, from the earliest picking of strawberries, through raspberries, to the latest picking of blackberries, when grapes and other choice fruits will fill out the season

---

Teach your boys to shut doors and gates after them. Also to clean their shoes before entering the house, and to wash, and to comb their hair before coming to meals.

EVERY MAN HIS OWN GRAPE. GROWER.

The idea that unless we put up a hot-bed, or or have a house for propagation, we cannot grow grapes from single eyes, is erroneous.—*Every farmer can do it for himself;* and if he has a little patience, can obtain the finest grapes at a trifling cost in a few years. Any one who sells vines will also usually sell cuttings; but even the buying of the wood is not always necessary, for almost every man has some neighbor or friend who is in possession of most of the new and rare varieties. Now, as soon as it can be done, the eyes should be dressed, cut evenly with a sharp knife, one-half an inch above the bud, one and a half inches below, when the wood is strong. When it is thin and short-jointed, I prefer making a two eyed cutting, which is to cut close below a bud, and one-half inch above a second bud.

When thus dressed, pack the eyes or cuttings into damp sand, and put away into a damp cellar, where they may be left until about the middle of February. Then bring the boxes or pots, in which the eyes and cuttings have been kept, into a living room, under a bench, settee or any place where they will not be in the way or be disturbed.

When there some three or four weeks, prepare a box about six inches deep, with holes in the bottom to prevent water from standing in it; cover the bottom one or two inches with gravel or fine coal cinders, or anything porous. On this put three or four inches of sand and leaf mould, or any mellow black soil, well mixed with the hand; in this stick your cuttings and eyes so that the whole of the eye appears above. When they are all thus inserted, put on pure fine sand so as to cover the eyes to their very tips; if they are entirely covered I think it no harm. Let this soil be kept merely damp for some weeks. Put the box on a mantle near the stove, or a cupboard top, or any place where it gets a pretty high heat.

It will not be long ere the buds begin to swell, burst and send up their nice little shoots which will afford some pleasure I assure them. Now, for some weeks the only thing to do is to keep a moderate dampness in this soil, which is best done by sprinkling merely sufficient to keep the ground or sand from getting dry at the bottom. When they have grown, say two or three inches, the box may be set to a window, giving the plants a little sun. I forgot to

mention, the eyes should be inserted some two inches apart each way. Here they may grow until there is no danger of frost, when they may be taken out of the box and planted in rows for a year, or set at once where they are to grow and bear. But before setting them into the ground the box should be gradually brought under the sun so as to have them hardened sufficiently, or they will be scorched. Also shade the plants for a few days with boards or branches of some trees. In this way I grew vines five feet high in one season, before I ever saw a hot-bed or green-house.

When the plants are to be takan out of the box, as above directed, they must be separated, and with a pointed stick loosen up the soil, or the tender roots will be broken and bruised.—*Cor. Germantown Telegraph.*

"WHAT VARIETY OF GRAPES SHALL I PLANT?"

In answer to this question, Mr. Wm. Griffith of the South Shore Vineyard, North East, Pa., gives the following in the *Country Gentleman:*

"Try all things, &c.," is a rule, and he who expects success in vine culture, must not presume to ignore this wise precept. When I began to plant grapevines, in the South Shore vineyards, I took, as my pattern and security for success, careful account of my neighbor Easton's single Isabella vine, on which I had seen three consecutive crops, well matured, and of delicious sweetness.

I reasoned that if one vine would produce such perfect and splendid grapes, a hundred thousand would do the same.

And this simple, self-evident problem has been solved, in the actual case of 100,000 vines, now growing, which I have planted in the said vineyards.

But where they can be grown and ripened there are now much better varieties offered to the cultivator, than the Isabella, and, in fact some, if not all of these, may be perfectly ripened in localities where the Isabella vine often fails to perfect its fruit.

Of these, I will here mention four varieties, which, while they may not all be more desirable than some other sorts, I am inclined, from my limited experience, to rank first in the list of new varieties. These are Iona, Delaware, Diana and Israella.

I place these in the order of their merit, as I regard them, and although experience may incline me hereafter to change them, I am willing to have my judgment tested, upon my present decision.

The faults of the grapes which have been most extensively cultivated in this country, are marked, and easily described. They are, too great acidity with extreme roughness in many of them; or a certain well understood offensive taste, and more offensive odor called foxiness. Hence, in all cases, where these objectionable qualities are prominent, the varieties should unhesitatingly be pronounced "unworthy of cultivation." And in proportion as these objectionable and damaging characteristics are recognized, the several varieties must be marked in the scale of excellence.

In some varieties, now much grown and widely disseminated, foxiness is marked and very apparent; while in others—as the Catawba and Isabella—it is overlooked by many.

The Delaware is entirely exempt from both of these objectionable features, and is, in habit and quality, *well nigh perfect;* while the Iona is, in my judgement, altogether so; and I therefore, unhesitatingly commend it to all who are capable of appreciating perfection in fruit. I pronounce the Iona perfect, confidently regarding it as free from all those objectionable qualities known and described as existing in other varieties, and obnoxious to all who grow and eat grapes.

For myself, I have often declared, and now repeat, that could I describe the qualities of a good grape, even much better than I am able to, and if Dr. Grant, or any other cultivator—by hybridizing, or otherwise—could grow a grape exactly to my order, in every particular, I am certain I could not thereby aspire to a fruit excelling the Iona. * * * I have neither Ionas nor Israellas to sell; I wish I had many thousands. I hope to have some day; but this year—this fall, I have ventured upon my convictions of their merit, to buy ten thousand plants at full rates, (I count this a little severe in the vender,) for spring planting.

These, with four thousand Delawares, two thousand Dianas, one thousand Ives' Seedlings, and five thousand each of Catawbas and Isabellas, will be added to the South Shore vineyards the coming spring.

I propose not long hence, to offer a short chapter on "training and pruning." But first and most important is the business of selecting and planting proper plants of suitable varieties

while the errors of training and pruning, and they are often prominent, may in due time receive proper attention.

Grape culture is at length fairly inaugurated in this country. Having abandoned all attempts to grow and cultivate the pure vinifera varieties of the old world, as entirely futile and hopeless, and now fairly beginning to realize the great value of our several native species, and proved that grapes of the greatest delicacy and perfection, are abundantly produced therefrom, we are at length ready to begin in earnest, the great, though inviting task, of supplying not only our vast and extending country, but neighboring countries as well, with wine and fruit unsurpassed by any grown upon the Eastern Continent, or upon the fertile islands of the sea.

The crop of the South Shore vineyards, the past season, was heavy, and of the best quality, free from rot and mildew, the vines retaining their foliage until both the wood and fruit were well matured, the Catawbas averaging 82 deg. of saccharine matter, as shown by the must scale, thereby affording a sure guarantee of most excellent wine, unless through ignorance or neglect the must is damaged in the hands of the workmen at the cellar, an event not likely to occur where Mr. John E. Mottier is charge.

PRUNING ISABELLA GRAPE.

The importance of allowing more room for the Isabella and other strong growing varieties, than is generally given them, which we have urged on former occasions, we find to be continually corroborated by the results of experiments. At the autumn meeting of the Fruit Growers' Society of Western New York, J. W. Clark, one of the most skillful and successful cultivators, and who had the best Isabellas on exhibition, said that he would not think of allowing less space for each plant than fifteen feet square, which would be equal to 225 square feet of surface. When the vines are young, they do not of course need so much room; and this has led many cultivators to adopt the opinion inadvertantly, that they do not require it afterwards.

During a recent visit to the grounds of J. E. WILLIAMS of Aurora, Cayuga Lake, he showed us the mode he had adopted for training his Isabella vines. They had at first grown to the top of a tall trellis, from which point they had been extended more than twenty feet in an upward inclined direction, and attached to a row of trees—the place where they were fastened to the trees being about twenty feet from the ground. He finds this extention to improve the quality and ripening of the grapes, and stated that the only well matured fruit of this variety in that place grew on these vines. Vineyards of considerable extent in the neighborhood, which had been freely cut back and allowed only a limited space, ripened their bunches badly. His Catawbas, the vines of which were 20 feet long on a trellis, were also well ripened. The vines of both these varieties were of considerable age, being two inches or more in diameter at the base.—*Co. Gent.*

FIRST LESSONS.

BY CHARLES REESE.

A few years ago a young friend of mine came to me for advice. He was an ardent lover of nature, and had become so much enamoured with her beauty and attractiveness that he had purchased a few acres in the suburbs of a large city, and resolved to spend a portion of his time in the study of her ever-changing and altogether lovely face.

He was pecuniarily quite poor, but had an ample stock of energy and perseverance—very good substitutes for capital; and felt sure he would succeed in whatever he undertook. He wished to know what to plant in order to get the largest and best return for the labor and money invested. I unhesitatingly replied, plant on every hillside and in every valley, FRUITS and FLOWERS; in every nook and corner, by shady wood and babbling brook, plenty of fruits and flowers; and my word for it, you will not regret it.

The boundless prairies of the west will furnish you with wheat, rye, oats and corn, for fifty years to come, for less than one half that it will cost you to raise them; and any attempt on your part to compete with them in the production of these crops, will surely end in failure.

The soil upon your farm is admirably adapted to the growth of fruits, and your proximity to a good market will be very advantageous to you.

Notwithstanding the astounding increase in the amount of fruit trees annually planted, prices are steadily advancing, owing to the largely increased demand for canning and otherwise preserving for shipment to foreign climes; and you will have ready sale for all you can pro-

duce; but you must give your whole mind to it. You must study the wants and habits of each delicate seedling; rise with the lark; and with untiring energy, work, work, work, till the daylight fades in the west; be like the sunbeam and the sparkling dewdrop, ever ready to raise the tender vine and the drooping flower, and minister to their wants; and you will receive not only an abundant return in the shape of interest on your investment, but a reward richer than if all the wealth of the Orient was poured at your feet.

Language is totally inadequate to describe the peculiar emotions of pleasure that with telegraphic swiftness flash along the illumined chambers of the soul, when some new truth is unfolded, and spread out in all its glory before it.

It is not the heart and brain alone that respond; but every nerve-wire in the whole system vibrates with intense delight, conveying to the outermost bounds of the spiritual as well as the natural organism the glad tidings that "unto us a son is born, unto us a child is given."

Who can measure the joy of a young horticulturist over his first ripe Bartletts, or Delawares, or Triomphe de Gands? I have known many hundreds of men associated together for divers purposes, clubs, committees, lodges, societies, &c., but there is always something wanting in their meetings; a new complicated piece of machinery may be before them; inventors, learned mechanics, scholars—all look, wonder and admire; and with wise head-shakes as to its success or failure, retire to their several homes, one jealous of the inventor's power, another envious of his fame, another covetous of his wealth; all pent up, contracted, bound in the fetters of art, unable to move hand or foot except at her bidding.

How different is the farmers' club grouped round the table groaning with the treasures of the garden, the orchard, the vineyard? Eden is again the home of man, and he hears the voice of God calling to him in the cool of the day, "Adam, where art thou?" Here are no inventions of men.

Look at these lilies: "even Solomon in all his glory was not arrayed like one of these;" and the genius of the mightiest on earth combined could not create a single blade of grass.

Here are no jealousies, no envious rivalries; all bow down at one common shrine to worship and adore the same God, a substantial and visible Creator, whose love and wisdom and power are manifested in every leaf and flower and fruit; and the feelings uppermost in every heart are those of gratitude, thanksgiving and praise for all His benefits.

My friend was satisfied with the promised reward; and with all the ardor of a young enthusiast entered into the cultivation of fruits and flowers.

With each returning season his interest increased and his mind expanded beneath the genial influence surrounding him. Difficulties which at the outset seemed insurmountable, rapidly disappeared as the days of trial came.

Few persons are aware how rapidly the products of nature may be multiplied; and the handful of strawberry plants which he set out five years ago, now number more than a hundred thousand. A dozen Delawares, Concords and Catawba grape vines, by carefully training and planting the cuttings, have increased to hundreds; and so on with raspberries, blackberries, gooseberries, currants, &c.; and as he walks up and down the long lines of trees and bushes, and vines laden with their luscious treasures, he is one of the happiest men on the earth.

His little farm, which has more than doubled its value, is the delightful resort of old and young; and from a very pleasant experience he is ever ready and willing to tell novices "what to plant."

He says a large majority of fruit growers plant too great a variety. It is much better to cultivate a few of each well, than a large number poorly.—*Gardener's Monthly.*

ANTIQUITY OF GARDEN PLANTS

We have historical evidence that existing species have not varied for several thousand years, and the reason is plain enough, because the external circumstances in which they have been placed have not varied. For all practical purposes, therefore, the characters on which species are founded, may be assumed to be constant; and a minute and careful description of a plant will suffice, not only for the present, but for many succeeding generations of naturalists. But we have no warrant from nature to assume that such specific, or even generic, characteristics either have, or will continue to be, permanent for an unlimited period of time; that they will survive all future changes in the physical geography of the planetary surface. We know that great changes may be effected in a brief space of time in the organization of plants by culti-

vation; and why should not an organic change be brought about in plants when their external circumstances are altered by nature in the course of ages? This world, what is it but a great and ancient theatre, where the scenery of life is ever changing? Look at that majestic and venerable tree; its present form appears to be fixed, yet that very form is as fleeting and evanescent as all the other forms through which that tree has passed from its first life movement in the seed; and what is true of that tree, which is a part of nature, is true of the whole of nature; the present appearance of nature now, is no more unalterable than at any other geological epoch; it is the last of the many phases of creation, and equally fleeting with all the others.—*English Paper.*

Written for the Ohio Farmer.

THE BLESSED GRAPE.

Grape men owe several things to the public and themselves.

1st. Post everybody up in season, how best to avoid and check mildew—*the* grape pest. Last year, with me, where it was watched carefully, and sulphur dusted on promptly as often as it appeared, and at its very first appearance, the sulphur was an absolute specific, and did good 100 to 1 of cost.

2d. Get up from seed and prove thoroughly more good varieties—every way hardy and desirable—it is a first-class duty.

3d. Learn and publish all the good uses grape fruit can be put to, including the making of good sweet wines for those who do not like sour wines; verily, is not their name legion? The fact is, very many people know almost nothing of good grapes, and must be taught in season to absorb the grape product.

4. Publish to everybody the best way to trim grapes. Respectfully, I do think the complex, artificial modes so often urged, utterly foreign to American needs. There is, I judge, in many vineyards about Sandusky, a very beautiful and simple what I would call fan-renewal system in vogue, that allowed no old wood, and yet looked to me perfection itself.

5. Why don't everybody plant grapevines in cities? In Philadelphia, for instance, they succeed wonderfully—far better than in the country adjacent. Is this the case generally? No one can reflect for a moment on the character of the grape vine and fruit, but can see its wonderful, as I believe not fortuitous adaptation to small areas and perpendicular surfaces, like crowded cities—where the whole earth is a solid city and all fruit must be wall fruit. Contrast the perfect beauty and utility of thrifty laden vines, with the seared, historic brick and stone walls of our cities, and say whether it must not be the blessed, bounteous grape that is predestined to redeem them from utter repulsiveness.

F. K. PHOENIX.

Bloomington, Ill.

WINTERING BEES.

When Bees are kept exposed to frosts, either in doors or out they should be well looked to immediately after each cold spell, as the mild weather with the aid of the heat generated by the bees, will melt the frost that has accumulated within the hive which runs down and forms ice upon the bottom board, and often the bees are smothered to death in consequence. It is probable that more bees are lost from this cause in winter, than from any other.

Those who still use the old box hives, generally have holes bored in the front side of the hives, which serve for ventilation, though designed really as passages for the bees; but while such holes may save the bees from smothering in the winter, they but invite the moth, the bees worst enemy during the summer months. Therefore, to afford ventilation, and also to guard against the moth, these vent holes have been supplied with perforated tin, or wire gauze, in most of the patented hives, and none could truly say, but that such ventilators are a decided improvement upon open holes. Still, from my own experience I would advise all persons who have hives in use thus rigged, to examine them now and see that they are free; for it is more than probable that the bees have gummed that tight. I lost several stocks two years ago, by neglecting this precaution, not knowing until then that the bees would be so *thoughtless* as to plaster up the ventilators that I had been at so much pains to provide for them; but so it is, and therefore the caution to be watchful now during the winter. Keep some other ventilation than what is obtained from the lower part of the hive.

Do all in your power to teach your children self government. If a child is passionate, teach him by patient and gentle means to curb his temper. If he is greedy, cultivate liberality in him. If he is selfish, promote generosity.

Ohio Annual State Conventions

AGRICULTURAL CONVENTION.

The Ohio State Agricultural Convention was held in the Senate chamber of the Capitol commencing on Wednesday, Jan. 3d, 1866, N. J. Turney, President of the State Board, in the chair. The following Delegates from County Societies were enrolled as members of the convention:

Allen, J. M. Hallor.	Lawrence, J. S. Favverty.
Ashland, D. A. Fenn.	Licking, David Smith.
Ashtabula, D. H. Prentiss,	Logan, John M. Glover.
Athens, H. B. Brawley.	Lorain, D. A. Stocking.
Belmont, J. M. Mitchell,	Lucas, W. C. Earl.
Brown, T. Jennings.	Madison, W. A. Neil.
Butler, Fergus Anderson.	Mahoning, L. Templin.
Carroll, B. R. Harvey.	Marion, Chas. Smith.
Champaign, N. H. Harr.	Medina, W. H. Witter.
Clark, L. B. Sprague.	Miami, W. B. McLung.
Clermont, J. H. Branch.	Morgan, J. B. Stone.
Clinton, J. S. Hoblet.	Morrow, A. H. Wrenn.
Columbiana, B. F. Nichols.	Muskingum, V. Best.
Coshocton, J. Miskimmen,	Noble, S. K. Young.
Cuyahoga, S. D. Harris.	Pickaway, A. L. Perrrill.
Darke, J. E. Matchett.	Preble, Jas. Albert.
Delaware, T. F. Joy.	Putnam, John Maidlow.
Erie, F. D. Parish.	Richland, A. C. Welsh.
Fairfield, N. Schleich.	Ross, Hugh Bell.
Franklin, J. Foresman.	Sandusky, T. Clapp.
Geauga, D. L. Pope.	Seneca, W. Lang.
Greene, J. R. Nash.	Shelby, J. Duncan.
Guernsey, Noah Hyatt.	Stark, J. P. Rex.
Hamilton, J. K. Greene.	Summit, J. P. Alexander.
Hancock, G. W. Galloway.	Tuscar's, U. C. Deardorff,
Hardin, I. C. Stevens.	Union, R. D. Reed.
Harrison, J. B. Jamison.	Warren, J. M. Roosa.
Highland, Benj. Conard.	Washingt'n, A. L. Curtiss.
Huron, A. Brightman.	Wayne, J. G. Troutman.
Jackson, J. Tripp.	Williams, J. Dillman.
Knox, J. S. Delano.	Wood, Geo. Powers.
Lake, H. N. Carter.	Wyandot, T. V. Reber.

After enrolling the names of the Delegates, Secretary KLIPPART read a paper on Agricultural Education, embodying the results of his observations in Europe during his late visit to that country, with suggestions relating to the establishment of Agricultural Colleges in the United States.

On motion of Mr. WELSH of Richland, a vote of thanks was passed to Mr. Klippart for his services in this behalf. A resolution was adopted for the printing of 3,000 copies in English and 1,000 in German, of Mr. Klippart's paper on Agricultural Education.

On motion of Mr. LANG of Seneca, it was resolved that the President appoint a committee of three to consider and report upon the subject the contemplated Agricultural College of Ohio. Messrs. LANG, BRANCH, and PARISH, were appointed.

On motion of Mr. GREER of Lake, a resolution was passed, protesting against the renewal of the Reciprocity Treaty with the Canadas.

On motion of Mr. HARRIS of Cuyahoga, it was resolved that the President of the United States be earnestly requested to make a change in the head of the Agricultural Department at Washington, by appointing Hon. N. S. TOWNSHEND of Ohio, as Commissioner of Agriculture.

AFTERNOON SESSION.

Mr. WELSH offered and spoke to a resolution against reducing the volume of National paper currency, which on motion of Mr. GREEN of Hamilton, was laid on the table.

A committee consisting of T. F. JOY of Delaware, J. M GLOVER of Logan and A. A. JEWETT of Cuyahoga, having been appointed to suggest business for the Convention, reported the following propositions:

1st. The best mode of conducting our County Fairs, and to bring this before the Convenion, suggest the following resolutions:

Resolved, That the improvement of Agriculture, Horticulture and Mechanics, in their various departments, should be the main and only object of County Societies; that all swings, shows, pedlars and everything, whatever, that tends to divert the mind from the great object sought to be accomplished, should be kept, not only from within the fair grounds, but a reasonable distance therefrom.

Resolved, That the social culture of our people is eminently desirable, and that our Fairs, properly managed, furnish fine opportunities for such culture.

2d. The source from which the appointment of trustees to the general management of our State Agricultural Society should emenate.

3d. What are the wants of American Agriculture?

We commend the adoption of the following:

Resolved, That the great want of American agriculture, is a more general and thorough mental culture of its votaries. That our sons and daughters should be as thoroughly educated as those of other professions.

The committee also commended the following:

Resolved, That county commissioners should be required by law to contribute to county agricultural societies an amount equal to what

may be contributed by individuals, for the purchase and improvement of county fair grounds.

Resolved, That we heartily concur in the resolutions adopted by the Ohio Wool Growers' Association, asking Congress to assess a tax of $2 upon all male dogs, and $5 upon females.

The Convention having accepted the above report, proceeded to the discussion of the first resolution under the first proposition, which after a warm and humorous debate was rejected by a vote of 32 nays to 24 yeas.

The Convention then passed to the consideration of the resolution under the third proposition, in relation to the Education of American farmers. On this subject Mr. GARDNER of Toledo, addressed the convention at some length in exposition of the labors and conclusions of the Commission appointed by Gov. BROUGH of which he was a member,—this commission having recommended the acceptance of the offer of Miami University at Oxford.

At the conclusion of Mr. GARDNER'S remarks, the further consideration of the subject was laid over till tomorrow morning.

The convention then took up the proposition of the business committee, in relation to Co. Commissioners being required to contribute for the purchase and improvement of County fair grounds; which after discussion was adopted.

EVENING SESSION.

The business first in order being the election of five members of the State Board, a ballot was had upon a call of counties, with the following result.

Nelson J. Turney, of Pickaway,	53
James Fullington, of Union,	38
T. C. Jones, of Delaware,	44
Wm. B. McClung, of Miami,	43
Wm. F. Greer, of Lake,	36
J. P. Alexander, of Summit,	31
John H. Branch, of Clermont,	16
Arvine Wales, of Stark,	12
J. M. Boosa, of Warren,	11
F. D. Parish, of Erie,	7
Giles Boalt, of Huron,	8
Solomon Brecount, of Champaign,	2
J. C. Jamison, of Harrison,	3
H. S. Conklin, of Shelby,	8
H. P. Cannon, of Crawford,	5
A. A. Jewett, of Cuyuhoga,	7

Messrs. TURNEY, FULLINGTON, JONES, MCCLUNG and GREER, all out going members, having received a majority of all the votes cast, were elected; thus no change was made in the Membership of the State Board for the current year.

The proposition of the business Committee to concur in the resolution of the Wool Growers' Association, advising a tax on dogs, was briefly discussed and adopted.

THURSDAY MORNING SESSION.

Upon the assembling of the convention this morning, Mr. LANG from the Committee on the College question, reported a paper setting forth the views of the majority of the Committee, but abstaining from any recommendation on the subject. A motion to adopt this report was spoken to by Messrs, LANG, JONES, PARISH and HARRIS, and the motion withdrawn, whereupon Mr. MCCLUNG offered a resolution that it is the opinion of this Convention that but one College should be attempted in Ohio under the Act of Congress granting lands for this purpose; which resolution was adopted.

Mr. HARRIS moved that the State Board cause to be published, as soon as may be, three thousand copies of the transactions of this Convention, including the several papers read at the same, for general distribution: which mowas adopted, and the Convention adjourned.

WOOL GROWERS' CONVENTION.

The Ohio Wool Growers' Association held its winter meeting in Columbus, commencing on Tuesday, Jan. 2. The sessions were held in the Senate Chamber of the Capitol. President MONTGOMERY called the meeting to order at 2 o'clock, P. M., and proceeded to deliver an opening address in which he reviewed the altered aspect of our National affairs since the meeting in that room one year ago, from which he deduced the most favorable conclusions as to the future of our country, and summed up in the words following:

"But in all this there is no cause of uneasiness. We have passed the point where other nations will seek to treat us on the principle that might makes right, and we have but to proffer reasonable terms to insure their acceptance. We have shown such a wealth of power that we have no need to be in haste, but let the bond be drawn, certified and stamped, and laid aside for our convenience of adjustment.

Meantime let us give our attention to the arts of peace. Let the artizan improve his handicraft, and the husbandman the culture of the soil; let excelsior be the motto and improvement be the countersign; let our fields be trimmed of bush and briar, and let us in a measure avert the curse: "Thorns and thistles shall it bring forth unto thee."

Let the irrigator encircle a wider l vel, and the drainer warm a deeper bed; let the spader make a finer tilth, and the plow turn a deeper furrow through a richer soil; let the horseman improve his stock that he may draw a steadier wheel, carry a smoother saddle and vie with his iron rival in his table of time. Let our cattle carry a straighter back and a broader loin; let our sheep produce a richer meat and a warmer coat, and the gentile herd a heavier ham. And following in the wake let manufacturers find their way. Let our ores be molten to the track of the iron steed; let our own wool be converted into clothing for the million, and let the possessor of the Angora wear his domestic Thibet.

Let our food be consumed by our own artisans, and let them furnish us with weapons of defence in time of war, and implements of ease and affluence in the better days of peace."

After the above remarks, Mr. MONTGOMERY took up the subject of the special business of the meeting and gave a cursory review of the proceedings of the Association since its beginning, then some remarks in reference to the formation of the National Wool Growers' Association, and the joint meeting with the manufacturers at Syracuse, ending with some suggestions as to our future action and prospects.

S. S. MATTHEWS of Licking, offered the following:

Resolved, That we fully endorse the action of our Committee who met with the Manufacturers at Syracuse, N. Y., Dec. 13th, and hereby return our thanks to them for their faithful services, which was unanimously adopted. The President then read the Interrogatories framed by the National Manufacturers' Association, and those framed by the National Wool Growers' Association, for the collection of facts and figures upon which each party is to argue its cause before the United States Revenue Commission.

S. D. HARRIS of Cleveland, moved the appointment of a committee of three to report Resolutions of business for discussion, which being agreed to, the President appointed Mr. HARRIS, N. S. TOWNSHEND of Lorain, and Dr. H. S. CONKLIN of Shelby.

During the absence of the Committee the Convention took up the Interrogatories framed by the National Association and agreed upon several of the answers. The remaining questions in this circular were referred to a committee whose report we may hereafter publish.

The Committee on Resolutions report:

1. *Resolved*, That we approve the policy of terminating the Reciprocity Treaty between the United States and the Canadas. Adopted.

2. That the wool growing interests of the country are entitled to a degree of legislative protection equal to that accorded to the manufacturing interest. Adopted.

3. That the interests of this country require an extension of the culture of worsted wools. Laid on the table for the present.

4. That the terms of membership in the Ohio Wool Growers' Association be so changed as to require the annual payment of $2, and life-membership $10. Adopted.

5. That the sum of —— dollars be paid to the Secretary of the Association for the year ensuing, in compensation for demands made by the Association on his time and services.—Adopted—blank to be filled hereafter.

6. That the Committee of the National Wool Growers' Association to meet the United States Revenue Commission, be advised to recommend to that Commission that a tax be levied on dogs sufficient to raise a considerable revenue for the government, or materially diminish the number of dogs in this country, or, both; and that in the opinion of the Ohio Wool Growers' Association such tax should not be less than $2 per head on male dogs and $5 per head on females of the same species. Adopted.

J. PARK ALEXANDER of Summit county, offered the following, which was adopted:

Resolved, That the Committee who may wait upon the Revenue Commission are hereby requested to furnish our Senators and Representatives with a copy of facts and statistics presented to the Commission.

J. SHARON of Harrison county, addressed the Convention at some length on the subject of protection to the wool growing interest and the importance of having that interest well represented before Congress by Delegates from the several Congressional Districts of the State. This discussion was also participated in by Senator JAMISON of Harrison, Mr. COMLEY of Columbiana, Mr. STEVENS of Hardin.

It was agreed that the election of officers for the year ensuing be held this evening at 7 o'clock, and the address of Hon. N. S. TOWNSHEND be heard immediately thereafter whereupon the Convention took a recess to 7 o'clock. P. M.

EVENING SESSION.

After assembling for the evening session, the Convention proceeded to elect officers, which resulted in the election of Hon. ROBERT M MONTGOMERY of Mahoning county, as President; Dr. S. N. CALDWELL of Miami Co., Vice President; S. D. HARRIS of Cuyahoga Co., Secretary and Treasurer; Hon. COLUMBUS DELANO of KNOX Co., additional Member of Executive Committee for the National Wool Growers' Association; Hon. N. L. CHAFFEE of Ashtabula Co., WALTER N. CHAMBERLAIN of Clarke Co., and JOSEPH SHARON of Harrison Co., Directors.

The election having been concluded, the President introduced Hon. N. S. TOWNSHEND, who proceeded to deliver the Annual Address, which was full of practical suggestions, and facts gathered from a wide range of travel and observation. As this address is to be published in a pamphlet containing the Transactions of the Association, we refrain from making extracts for the present.

After the conclusion of the Address, the question of a Delegation to represent the interests of Wool Growers at Washington, during the pendency of the Tariff question, was taken up, and a variety of resolutions offered, pending which the Convention adjourned to Wednesday morning.

WEDNESDAY MORNING SESSION.

Upon the assembling of the Convention on Wednesday morning, Mr. JAMISON of Harrison county, offered a series of resolutions to effect the object under discussion at the adjournment last evening, to which Mr. MONTGOMERY offered the following as a substitue, which having been submitted to a vote of the Convention, were adopted.

Whereas the production of wool is one of the leading branches of agriculture, and one which not only effects our own interest, but the interest of community at large; and it is deserving and will repay the fostering care of governmental protection, and is of right entitled to assistance equal to that afforded to the manufacture of woolens.

Whereas the present tariff in its actual operation is believed to afford less protection than the burdens imposed on us by our direct and indirect taxes, thus affording a premium on foreign labor in competition with our own.

Whereas, the working of the Reciprocity Treaty hitherto admitting Canada wool free of duty has been unfavorable to the production of wool and especially of combing wool in the States,

And whereas we believe that the most available means to meet our governmental liabilities lie in the encouragement of home industry,

Therefore Resolved, That we ask Congress that they pass such acts as will prohibit the introduction of wool free of duty, and will impose such amount of duty on foreign wool as shall counterbalance our direct and indirect taxation and afford us such protection against foreign wool as will encourage and develope the business of growing domestic wool.

Resolved, That the Executive Committee of this Association be instructed to use such means as shall in their judgment be best adapted to bring this subject earnestly to the attention of Congress.

Resolved, That we suggest to the wool growers in the several counties in the State, the propriety of meeting in their several localities and by the exercise of their right of petition presenting their views on the subject of a protective tariff.

Resolved That we hereby invite the wool growers of our sister States to join us in concurrent action.

Mr. ALEXANDER offered the following:

Resolved, That we recommend the formation of Wool Growers' Associations in each county of our State, to act in co-operation with this Association, and that our President is hereby directed to appoint some person in each county not already organized, to call a Convention for that purpose. Adopted.

The hour for the assembling of the State Agricultural Convention in the Senate Chamber having arrived, the Wool Growers' Association adjourned.

THE BEES will soon take their winter airing upon some warm day, and when they do so, be sure the hive is so ordered that they can go out and return without hindrance. Also be ready to bear a helping hand to any bees which may stay out so long as to be chilled and unable to get back into the hive. At the same time is a good opportunity to examine the store of honey in the hive and determine whether artificial feeding will be necessary. It will also afford a a good opportunity to brush the bee-chips from the bottom board of the hive.

Premature consolation is but the remembrance of sorrows.

The Agricultural Department.

For the Ohio Farmer and Cultivator.

UNDERDRAINING SWAMPS.

I have had some considerable experience in muck or swamp ditching. Some time since I noticed in the *Farmer* some inquiries whether boards should be placed under or over the tile. Now my experience teaches me that tile should not be used at all in soft, mucky land—that it is not only unnecessary, but a nuisance, for the reason that it effectually prevents the assistance of that little friend of all owners of such land, one of the crustaceous family conveniently called crawfish, which is willing to work for the farmer at all seasons of the year if so be the farmer will give him a chance to do his work with efficiency.

I have ditches dug after the following manner, now ten or twelve years old, and they work admirably: Dig a ditch from 2½ to 3½ feet deep, as the case may be, as narrow as can well be done with a common spade. Then when this is done I go back to the starting point and dig eight inches deeper, with a spade made for the purpose, with the blade but four inches wide, the increased depth being in the middle of the original, leaves a shoulder on each side on which I lay good white oak inch plank, eight or ten inches wide, and then fill up. This is all very simple, but they are far the most effectual ditches I ever had dug. I have tried tile in such land, but I would not pay ten cents per rod for any more of that kind of ditching in that kind of land. Neither will mole ditching answer in this part of the country; the muskrats soon destroy it.

In laying down the plank I commence at the head of the ditch so that the under-lap of the plank may be down stream. The plank will not rot during at least one generation, except at the mouth of the ditch, and if they should the water has made its course and will continue to run. I have short blind or covered ditches made more than twenty years ago, with old rails too rotten to be put in the fence, and the water continues to flow from them to this day, although the rails doubtless were gone long ago. There is a perceptibly increased flow of water from the ditches, or the most of them, since they were first dug, and the ground is drying further and further from them each year. Some years ago I tried to drain two very similarly situated pieces of ground one with tile and the other with plank alone; the latter is now a fine blue grass sod where wild grass only grew before; the tile ditching has done but little good, only drying the ground but a few feet on each side, although I thought at the time that the tile ditch ground would be the easiest drained, as there was some fall, the other had no fall—indeed the fall was the oth er way and had to create a fall by depth o ditch.

WM. RENICK.

WHAT SHALL FARMERS DO?

What should be the aim of the farmer in the present extraordinary position of his business? This is a very proper question to ask at the present time, when the labors of the past season have closed, and while some time yet remains, before the opening of another spring, for a thorough consideration of the subject and arrangement of future plans.

The high price of almost every farm product operates as a strong stimulant to every farmer to make the most of his land; but a serious obstacle is met at the very first step by the extreme scarcity and high wages of farm labor This dilemma is very likely to lead many to the old and unprofitable course of *skim-culture*, unless prevented by proper intelligence on the subject. Farmers will be tempted, in the hope of doing all they can with a small amount of labor, to omit practices essential to high cultivation and success. They will try to plant and sow fifty acres of land with a force scarcely sufficient to go over thirty acres in the best manner. As a consequence, they will plow wider and shallower furrows, and harrow the land hastily, and trust to good luck in giving heavy crops in return. Heaps of manure will either lie unspread, or if actually applied, will receive less harrowing, and be badly intermixed with the soil. Broad corn-fields will be marked with uneven patches, and be encumbered before autumn with a heavy growth of weeds. In other words, they will have selected, by such management, the very worst system, and that the least adapted of all to the present emergency. Skim-culture requires more labor, for what it obtains, than high farming. Every skillful manager knows that it is easier and cheaper to obtain a thousand bushels of corn from fifteen acres than from fifty. It is not because the successful farmer obtains occasionally a very large crop or a high price that he makes the

business permenently profitable, but because he uniformly raises good crops without failure through all vicissitudes of seasons. This he can only do by keeping his land in the best condition, and giving the best cultivation. The superficial manager sometimes sees an occasional or accidental good crop raised with little care; and he is tempted to try the same mode in other instances, with the hope that each will prove alike lucky, although the failures may be nine cases in ten—in the same way that weak minded people venture their property in lottery tickets, although they know their chances are very slim for obtaining anything in return.

It should be a prominent aim at the present time to concentrate labor—not to spread it over an extended surface. The former, if well directed, will be sure to bring certain returns; the latter, very uncertain profits at best, with a strong probability of failure. Cultivators, who uniformly raise good crops, are those who are careful never to waste labor—who do not apply manure to a wet soil where it cannot possibly afford a fair return; who avoid planting so late that a heavy growth is impossible; or who undertake so many operations that they can never properly accomplish any. They take time by the forelock—they refuse to begin any operation that they cannot carry through in the best manner—they keep all their operations in a compact shape—and by good calculation, and well laid plans, every thing is up to time. They thus obtain more from a given amount of labor than can be possibly reached in any other way. This is the very kind of management suited to the present emergency. The farmer who is compelled to pay two dollars a day to laborers, will receive more by such management than by spreading the labor over a broad and profitless territory.

Every one should know, long before spring commences, precisely what he is able to accomplish, and what he is going to do. If contingencies are depending, plans should be well laid for such contingency. Taking the number of days from the opening of spring until planting time, and allowing one-third at least for raining days and accidents, he should know by the amount required for each day's plowing, how he will come out in his undertakings. If he finds he has marked out too much, he ought to reduce at once the proposed extent of his operations. If he does not, he will be sure, in the first place, to do his work in a hurried manner, and secondly to plant too late—the two great leading causes of bad farming. These will be followed by weedy crops, because he will be behind hand all summer; and his labor, for which he pays two dollars a day, will really cost him four or five dollars, because it will be continually applied to a disavantage,—to the wrong end of the lever. It is more than usually important, therefore, to examine and digest plans thoroughly during the present winter.

In the meantime, everything practicable should be done now that may interfere with the regular order of labor after spring opens. Fences should be repaired in open weather to prevent that worst of interruptions—intruding animals. A half-year's fuel should be procured and prepared for use. All the manure that is accessible should be drawn out, and spread in the best manner where it is intended to be used—it will be of more value to the coming crop for this early application, and the ground will not be cut up and poached by the horses and wagon wheels used for drawing out the manure on the soft soil of spring; and lastly, and by no means least, procure the very best implements, and have them completely ready when the campaign opens. A hoe that will enable the laborer to accomplish fifty per cent more in work, will not be long in paying for itself at present high wages. The plow that inverts the soil in the best manner, and runs with the least force of draught, will add many dollars' worth of time to the man and team who use it throughout the season.

There is another very essential point to success—and this is that every manager should give close attention to the execution of every part of his plans. An eminent stock-raiser made it a rule to place his hand daily on every one of his animals. If any thing went wrong he was sure to detect it immediately. If any improvement was suggested he was able to see it carried out under his own inspection. The extensive farmer will not be able to perform continued labor, for he should witness so far as practicable the operations of every department. And yet if he is a skillful worker, with his own hands he can not only correct many imperfections in the work of his men, but often throw new life into them in cases of emergency. The limited farmer who has less to oversee, may to a greater or less degree, occupy himself with regular labor; but still if he is an observant man he will find that it is better to err by too much supervision than by a neglect of many important points involving considerable amount

for the purpose of accomplishing a single day's work.

To sum up then—let the order for the coming season be—1st, well digested plans; 2d, concentrated labor—or everything done in the best manner; 3d, the best tools in readiness; 4th, the performance of everything in winter that may interfere with spring and summer work; 5th, personal supervision of every department.—*Rural Affairs.*

DEMAND FOR AMERICAN WOOL.

BY JOHN L. HAYES, OF MASSACHUSETTS.

The requisite above all others necessary for the development of our manufacture, is a sufficient and diversified supply of the raw material —wool. For this our main dependence must always be upon our own agriculture. An instinctive sentiment of patriotism leads every consumer to prefer a home product, if it will suit his purpose equally well with a foreign product. It is for the interest of the consumer to buy at home; he saves commissions, exchanges, transportation. He can select exactly what he wants, and he can sell his own products when he buys. The statistics collected by the Association show that the vast majority of the manufacturers of the country use only domestic wool. Of 4073 sets, 2171 are employed wholly upon domestic wool. Of 931 mills, 767 use domestic wool; while only 46 mills in the whole country use foreign wools alone.

So absolute is the dependence of the manufacturer of each nation upon the wool growers of his own country, that the characteristic features of the manufactures of different nations have been impressed by the peculiar conditions of their agriculture. I will cite some examples, which will serve at the same time to show the direction towards which it is desirable our own agriculture should tend.

The sheep of England at an early period were divided into two distinctly marked classes. The one class, thriving upon the dry uplands, produced a short wool, adapted solely for making felted cloths, called clothing wool. Of this class the original Southdown was a type. The other class, of greater size, flourishing upon the rich moist plains, produced wool characterized by great length, strength, transparency, and the little degree in which it possessed the felting property. This wool, fitted for making serges and stuff-goods, was called combing wool, from the instrument used to make the fibres straight and parallel preparatory to spinning. The type of this class was the Leicester sheep. In raising sheep of both kinds, the primary object anciently was the production of wool; the mutton being merely accessory.

Under the old system of pasturage, it was found that but a given number of sheep could be kept on a certain space of ground; and, throughout a portion of the year, they were deficient in nourishment Towards the end of the seventeenth century, the culture of turnips was introduced from Holland to England, with the financial and political institutions brought over by William III. Under the new system of agriculture, the artificial or turnip husbandry, a regular supply of food was provided for each season of the year, and double or treble the number of sheep could be kept upon the same land. The agriculturists of England then began to perceive that the meat of the sheep was a more important source of profit than the wool, and that the wool must be the accessory.

The revolution, which established the superiority of meat over wool, was principally due to Bakewell, of Dishley, to whom England owes hardly less than to Watt and Arkwright. Before his day, the English sheep were not fit for the butcher till about four or five years old. He conceived that if it were possible to bring sheep to their full development before that age —to make them fit for being killed at two years old, for example—the produce of the flocks by this means would be doubled. To accomplish this, he applied to the old Leicester sheep of his neighborhood what is now the well-known principle of selection in breeding, but which may be said to have originated in his brilliant experiments. So complete was his success, that the breed obtained by him, called the "New Leicester," is unrivaled in the world for precocity, produces animals which may be fattened as early as one year old, and in every case have reached their full growth before the end of the second year. To this invaluable quality is added a perfection of shape which renders them more fleshy and heavier for their size than any known breed. Bakewell himself was not wanting in remuneration for his labors. So great was the appreciation of his new flocks, that he let his rams for one season for the enormous sum of six thousand guineas.

The "New Leicester," in time, came to be the most numerous and widely extended breed in all

England. In many districts they displaced the short-wool breeds; in others modified them. The extension of this breed gave preponderance to the production of the long wool with which it was clothed. The great value of Bakewell's labors consisted, not only in contributing a new race realizing the maximum of precocity and return, when placed on suitable lands, but in pointing out the means by which other indigenous races might be improved. The ancient race of the Downs, adapted for the highlands where the "New Leicester" did not thrive, originally producing short clothing-wool, was formerly of small size, and yielded but little meat, and would seldom fatten until four years old. By a careful selection of breeders, and the good winter regimen which the turnip husbandry gives, the English breeders caused the Southdown to become the rival of the "New Leicester" in early development and perfection of shape. They fatten generally when about two years old, and are sold after the second clip. But a change was also effected in the character of the fleece, which the farmers at first refused to believe. It lost the character of a clothing wool. It became longer and coarser. As Mr. Youatt says: "That which was once a carding, had become a combing-wool; and useful and valuable for a different purpose. It had not deteriorated, but it had changed." The same change, from the same cause, has been effected in the Cheviot wool of Scotland.

The result of this direction of the agriculture of England, to seek profit rather from the meat than the wool in the culture of their flocks, is truly astonishing when a comparison is made with France—which pursues a different system—making the meat accessory to the wool, as it is with us. Each country has an equal number of sheep; but England feeds one sheep per acre while France feeds only one-third of a head. The produce of the English sheep is double that of the French; and the average return of an English sheep-farm is six times greater than a French one.

The effect of this system upon manufactures is no less remarkable. The wool of England, without the knowledge or purpose of the farmers, has become a combing-wool; and the worsted manufacture, through the unconscious influence of English agriculture, has become developed to such an extent that the towns of Yorkshire have grown up as marvelously as those of our great West.

The uses of the wool have changed. It was anciently employed principally for making *says* and *serges*—grave stuffs for monks or mourners. It is now principally used for making light fancy fabrics for female apparel. The female of modern times, arrayed in the bright-colored textures of Bradford, may be likened to the Fidessa of Spencer in her outward aspect:

> "A goodly lady clad in scarlet red,
> Purified with gold and pearls."

I need not make the application of the lesson contained in these facts to our own country. We imported, in 1860, 15,000,000 of worsteds, principally from England. We made only $3,000,000. To replace the English worsteds we have absolutely no raw material, and depend wholly upon the Leicester and Cotswold wools of Canada. Why should not the American, as well as the English farmer, seek a profit in mutton and wool as well as in wool alone, and thus supply the greatest necessity of American manufacture?

WINTER PLOWING.

In this climate, where plowing can be done in the warm spells that visit us at this season, the land receives greater benefit from being plowed now than it receives from either fall or spring plowing. The ground plowed in the fall becomes settled and packed by the heavy rains, so that the frost cannot penetrate it as well and ameliorate its condition. When plowed in the spring, the frost does not act at all upon the clay, and it is more or less sticky all summer, particularly if wet. By plowing now the soil is left loose and porous, the frost penetrates it and causes it to crumble. The insects are dormant and cannot seek warm quarters when turned out, as they can in fall or spring, and are destroyed by freezing. The soil can be easily prepared by harrowing in the spring for any crop, while that plowed in early fall will have become so packed that it will be almost impossible to prepare it for seed without another plowing. So, farmers, put your teams to work now, whenever the weather and soil admit, but don't plow the ground wet. If you do, your land will not recover for years, as we know from a long experience.—More winter plowing should be done. It not only improves the soil, and kills the insects, but it helps work along in the spring amazingly to have the plowing all off one's hands.—*Rural World.*

The Horseman's Department.

SHOEING HORSES.

BY MAJ. W. J. CULLEN, MINNESOTA.

There are a great number of diseases which afflict the horse, and which are attributed to various causes, which are all, directly or indirectly, produced by improper care of the animal's feet, and by bad shoeing. Of these may be named contracted feet, corns in the heel, sand or quarter cracks, gravel, thrush, springing of the knees, and shrinking of the shoulders. These are the more common diseases of the horse, given in common language, as used by smiths and farriers. These diseases are peculiar to horses that have been shod. My experience in the Indian country has convinced me of this; for, of the thousands of Indian ponies that I have seen, and which are never shod, I have not met one having either of the diseases named.

As the diseases named most frequently affect the shoulders, fore legs and front feet of the horse, I shall speak of these latter more particularly; while, of course, the directions given should be followed as well for the hind feet as the fore. Now the natural shape of the horse's front foot is circular—as broad as it is long. The frog is the life of it—supplying oil to the wall of the hoof, and elasticity to the whole. It is of a wedge-like shape and is connected with the outer and hard portions of the foot by ligaments, which are commonly called braces. In shoeing, the first thing usually done by the smith is to pare this frog, and the next is to cut away the braces which connect the frog with the balance of the foot. The effect of this is, first, to dry up the frog, and to change it from a springy, vitalizing substance, into a dead and bony one; the second is to contract the hoof, changing it from a round to an oblong shape, and subjecting the animal to one or other of the diseases named.

The first rule to be observed by the smith, then, who wants to shoe properly, is, never to touch the frog with a knife. Nature will take care of that, and whenever the covering becomes too thick or hard, it will scale off of itself. The second is, never to cut the sides of the braces, for such cutting separates the frog from the hoof, to which it furnishes life, as I have already said. The third is, never to open or cut the heels, for the substance placed there has its use to preserve the shape of the foot and preventing it from contracting; but confine your cutting and rasping to the sole and wall of the foot, and employ these only for the purpose of leveling the ground surface of the foot so that it will bear naturally and equally upon the shoe. The fourth is, never to fit the shoe to the hoof by burning, as is the common practice; for the hot iron destroys the healthfulness of the hoof, by drying out the oil which helps to give it elasticity, and to promote its growth; but, on the contrary, first level your shoe perfectly, and then fit the hoof to the shoe with the knife, rasp and straight-edge. These rules, strictly observed, will preserve the foot in a healthy condition; and, the foot thus preserved, all cause for the diseases mentioned will be obviated or removed.

That is to say, if the shoe itself is properly made; for, without a true and well-shaped shoe, the careful preparation of the foot to receive it will only partially avail. Such a shoe should be both concave and convex in shape, and formed to correspond with the structure of the foot. The weight of the animal should be thrown upon the hard outer wall, and be equally distributed upon all portions of the foot which were intended to bear such weight. By looking at the horse's foot, it will be seen that the portions thus intended to bear his weight are the front and quarters. The depth of hoof in these portions is very great; while at the heel the hoof is thin and not calculated for heavy pressure. Now, with the common, flat, three-calked shoe, over two-thirds of the weight of the animal is thrown upon the heel of the foot, or upon its most tender portion. With a correct shoe, this tender part of the hoof will be almost entirely relieved from this pressure, and be made to bear only its natural proportion—a thing impossible with the ordinary shoe, for, in that, two of the three calks are set directly under the heel.

Such a shoe as I have described—one obviating every objection that can be urged against the common shoe, and answering every requirement of the perfect shoe, is found, so far as I can judge, in the shoe made under the Goodenough patent. Of the full width of the common shoe, its lower surface is concave, bringing the pressure upon the outer edge, and thus corresponding exactly with the shape and design of the natural foot. Instead of three, it is made with five or seven calks, interspersed along the toe and quarters of the hoof, where there is

depth sufficient to bear the weight, while the heel is relieved; or rather the shoe is calked all round, with holes countersunk for the nails by which the shoe is fastened. The great value of this arrangement will be apparent to all. Aside from the advantage of securing equal and uniform bearing upon the parts of the hoof which are designed to stand pressure, the countersinking of the nails is an item of importance in the wearing and firmness of the shoe. It saves the nail from possible contact with stones or the ground, leaves the shoe thoroughly fastened to the hoof while it lasts, and saves all necessity for clipping the shoe, either at the toe or on the quarters. It, therefore, protects the wall of the hoof instead of ruining it, as the clipped shoe always does.—*Wilkes' Spirit.*

BROKEN WIND IN HORSES.

There is no cure for broken wind, and it is but seldom that the treatment can be more than palliative. Anything that has a tendency to distend the vessels, as a state of plethora of the stomach and bowels, aggravates the complaint by rendering the expansion of the lungs more difficult. For this reason all stimulants should be avoided, and we should labor to secure regular evacuations from the bowels. We should not urge the affected horse to rapid motion or give him a sudden surprise, because, when either is the case, the distention of the lungs becomes too violent.

Broken wind is hereditary only so far as the construction of the horse is concerned. The lungs must have plenty of room for expansion, therefore all narrow chested animals, if not properly handled, are liable to the complaint. The high spirited and light, active horse, such as the thoroughbred, is but rarely affected with broken wind. The heavy draught horse is more subject to it, because his chest is round, exhibiting great power and large lungs, with but little room for expansion, and indicating thick wind, which generally degenerates into broken wind. A heavy, clumsy horse shows signs of great distress when forced beyond a slow pace, but will perform the work for which he is designed if not pressed beyond what seems to be his natural gait. Rapid motion and violent exercise, for these reasons will produce broken wind in the draught horse.

Many of our farmers bestow so little attention upon their horses and are so injudicious in feeding, that it is a great wonder that we do not meet with a greater number of wind-broken horses. Severe exercise should never be required of a horse immediately after a hearty meal. Hard work, just after the consumption of nutritious food, distends the stomach beyond the degree intended by nature. Irregular feeding and irregular work are also fruitful sources of evil. A gross feeder devours almost everything with eagerness, thus impeding the action of the lungs. A depraved appetite, however, may not only be a cause but a consequence of broken wind. The farmer should take greater care of his horses. He should exercise greater prudence in working and feeding them, and should not refuse to bestow that attention necessary for the health of the animal. He should never gallop a horse with a stomach full of food or water. This kind of exertion, if protracted, will rupture the delicate cells of even the soundest lungs.

As no medical skill can repair a broken down structure of the animal system, science cannot restore the lungs of a broken winded horse to their natural, healthy condition. As we have stated before, we can palliate the disease but not affect a cure. The food of the wind-broken horse should be given regularly at stated times and only in moderate quantities; and we should select that kind which contains the greatest amount of nutriment, because it will sustain life and occupy less space in the stomach. For instance, the animal should be supplied with corn, and not be allowed to feed largely upon hay. A manger feed, composed of bran, oats and beans, or in fact, any highly nutritious articles, will be found more valuable than any other. Carrots should be fed with a lavish hand, because they are easy of digestion and keep the bowels in a laxative state. Sweet turnips, parsnips and cooked potatoes also constitute good articles of food. In feeding upon straw and hay, the stomach is kept constantly full, pressing upon the lungs.

The wind-broken horse should have plenty of exercise, but it should not be of a violent nature. As the disease is incurable, we should use every possible means to guard against its promotion; and to effectually check it, we must remove the causes from which it springs. This we can do in two ways: first by proper management, judicious feeding and regular work; second, in securing greater breadth to the chest of the horse, by a free admixture of the blood of the thoroughbred with that of the common breeds.—*Turf, Field and Farm.*

For the Ohio Farmer and Cultivator.

KEEPING FLOWERS IN WINTER.

Many of us in the country have not the benefit of a green house in which to deposit our tender plants for winter, and consequently must always be on the watch to keep our pets from either freezing or starving. Such plants as are only to stand over,—roses, azaleas, oleanders &c., may be kept in a light cellar where they will not freeze; but those for winter flowering will require more careful attention.

Plants which have bloomed profusely during the summer or autumn, can not be expected to bloom during the winter, as they must have rest some time unless we force them to bloom themselves to death.

An invalid lady friend of mine, who always has the nicest of flowering plants in her room, says she keeps them in such fine condition by letting them catch all the sunshine they can. The flower stand should be near a south or east window, if possible, and on very cold nights, should be removed towards the middle of the room, or to some less exposed situation, unless there is a fire kept up in the room all right. The mold in the pots should be kept moist by copious waterings at necessary intervals, rather than by spoonfuls every day. A good way to water plants is to set the pots in some place where you do not care for spattering, and then take a watering pot with a fine rose sprinkler on the end of the spout, fill the watering pot with soft water—not icy cold—and shower all over the foliage so as to wash off the dust. If this cannot be done, the dust should be gently wiped off with a wet sponge.

An even temperature is the most difficult for us to attain in ordinary country houses: this may range all the way from zero up to 75 deg., which is very bad for the plants, and should be avoided as much as possible. A lady of my acquaintance is keeping a camellia for winter blooming, by covering it at night with a screen of batting quilted upon mosquito bar, which protects it from the cold and at the same time does not cause the vapor to condense upon the plant as it would if covered by a less porous enclosure, as when a bell glass is put over a plant, which renders it unfit for exposure in the open air at any time. The care of home plants is a good deal like the care of little children—they must be kept clean and healthy by plain fare and regular habits.

I wrote you last month to abuse Cellar Kitchens; I will retract so far as to say that a south window in a celler kitchen is a nice place in which to winter house plants; the atmosphere of such a place is moister and the temperature more even than in rooms on the floors above. SUN BONNET.

Hazel Dell.

DRESS AND DISEASES.

There is no truth more firmly established among medical men than that disease follows fashion as much as bonnets do. When thin shoes prevail, consumption is the prevailing epidemic with females in every fashionable community in the country. When low-necked dresses are in the ascendant, sore throat and quinsy are the raging maladies. When "bustles" and "bishops" made their appearance, spinal affections became "the *ton*." The reign of corsets is denoted by collapsed lungs, dyspepsia, and a general derangement of the digestive organs. Indeed, so intimately are dress and disease connected, that a doctor says that all he needs to determine what the majority of the young women are dying of is to have an inventory of their wardrobe handed to him.

GOOD NATURE.

Good nature is one of the best things in the possession of man. When it is constitutional it is invaluable. How many evils it bears—and hence avoids them, and their consequence. But good nature may be cultivated. The most is to begin. Perseverance will soon get up a habit—and then the thing is easy. A good natured man has few enemies from necessity; and to have enemies is not only dangerous but very uncomfortable. Good nature is Christianity the best of things among men, as all the wise men of the world, and the greatest of them have advocated. To cultivate good nature is to cultivate Christianity. Ah! how unwise we are not to heed this thing. Not that we do not know it; but it is so hard to mortify self; it is so hard to suffer in order to get good. It is however the way.

The Housekeeper's Department.

For the Ohio Farmer and Cultivator.

DOMINION OF FASHION.

The slavery of American women to Fashion is absolutely, in our estimation, every way more hopeless and dangerous than was African slavery in the South. Tell me, where is the voice of protest—where any effort to break away and escape, as did thousands from the barbarism of slavery? Where is there such a thing known as independence and originality among women? On what other topic is she so sensitive as that of dress? Where is there any right education, any sound physical, mental, practical development? any capacity, any breadth of vision or effert encouraged or demanded among them? More than all, where are woman's true friends and helpers among men?

In the early history of the anti slavery and temperance reforms, there were not wanting strong, bold men to cry aloud and spare not—to expose the perils of the situation, and they were heard. Now what do we behold!—with the best country, and the fairest start, with every possible incentive to noble effort, what but the most positive, rapid increase of ill health, effeminacy, physical debility, luxury and corruption? In this great hour of trial by no means overpast, with the heaviest national debt burdens upon us, what are our American wives, daughters, mothers doing principally with time, money, example? Is it to learn and teach domestic skill, invention, handicraft, economy, active charity, pecuniary independence, a thoroughly furnished, practical education? Answer—Fashion, style dress; supremest effort and acme of modern female ambition—undeniably, of course, with shrewdest eye to current masculine approval; said masculine being fit children of such mothers!

And where is heard against all this flood-tide the voice of religion or reform, of statesman or prelate, of any associate body? but as a nation we professedly follow the meek and lowly CHRIST—although profoundly taken up with tinsel, with empty outside shows, baubles—striving vainly like the prodigal of old to feed the immortal soul on husks!

This slavery of wives and mothers is undermining everything real or substantial—it makes of them absolute triflers, stalking dry-goods advertisements; it compels imprisonment in parlors and carriages; it forbids exercise, health and development, it dries up everything like practical skill and accomplishment, and transforms angel woman into a helpless, soulless, starched, animated doll-ninny. Why, thus bred, should we not as people loathe labor, with many scarcely capable of enduring recreation? Is not work becoming unfashionable? Yet only that and economy, good, old-fashioned republican simplicity and sturdiness, can ever pay our national debt and save our beloved institutions. Millions for defence, for both interest and principal of all we owe, for whatsoever is true, lovely and of good report, but not one cent for folly and fashion. * * *

For the Ohio Farmer and Cultivator.

UPPER STORIES.

In continuation of the brief essays upon this subject we would first remark that this cheerless looking apartment is not consigned to Biddy alone. Going out from the city and taking a peep into the farm houses where comparatively few are employed to do the household work, this falls to the lot of the daughters, and often their surroundings are no better than those of Biddy in the city.

We contend that the apartment in which a person naturally passes more or less time sleeping, dressing and resting, should if possible be furnished cheerfully and tastefully; also that if the mother expects her daughter to become a neat and thoughtful housekeeper, she must begin early with her, and no system is better adapted for the exercise of the child's talent in this line than to have a room or part of a room to be kept in order by herself. She will soon learn to take pride in its appearance, and thus the first principles becoming instilled in early years the result will hardly fail of being a valuable one. Spring will soon be here and the housekeepers generally expect then to have a cleaning season. This is the time when men instinctively shun the house, and no wonder. Most of these excellent and neat women persist in turning the house inside out all at a time—and when any unfortunate ventures indiscreetly over the threshold he must sit only on the edge of a chair with his feet hanging out over the door step.

Now, girls, sometime when your ma goes a-visiting on one of the first warm spring days, we propose that you enter into a conspiracy, five or six hundred of you who read the *Ohio*

Farmer, and institute a new order of things in the household, viz: go to one room—of course you can guess what one we would suggest—if there is a carpet take it up and after a thorough shaking hang it up to air; then commence the cleaning. It can be completed within three hours, unless the room is extraordinarily large and difficult to clean; the floor can be wiped so it will dry quickly, and the carpet be put down in at least three and a half hours from the time it was taken up; even if it requires mending that can most always be done easiest after it is tacked smoothly upon the floor. It is then just as complete and clean as if the carpet had stayed out for a week and in consequence, everything else waiting its motion to be restored to order. There is nothing to prevent every other room to be served with the same dispatch —and everybody in the house will be better natured for it.

But the girls' rooms are not to be left after having been cleaned simply. The girls can often have an hour or two we are sure, all through the spring and the summer. There is moss in the woods all the year round, and hemlock grows green by the rivers. We hasten always to the Christmas festivals and gaze admiringly at columns and arches decorated with evergreen wreaths, and we can be thus surrounded all the year with very little time expended upon the work. When we were young we confess to the foolishness so highly disapproved of by some, of hanging myrtle or evergreen over the upper part of the window which added much to the cheerfulness of the apartment.—These will maintain their natural color for months and will not crumble and drop upon the floor unless disturbed. The bare walls, too, may be relieved in the same manner. With this inkling of the project we are going to disclose, we will close for this week, but don't think we are going to cease haunting you yet, for if possible we're going to create a disturbance in the upper stories and one of these days shall call for the amount of our bill of suggestions.

The housekeeper experiences a great sense of relief after the flies, spiders and bugs have been dislodged fram the winter quarters, and we think no one will seek to deny the fact that the places where these necessaries collect in the largest numbers are generally in old lumber rooms, dark closets and places where human beings would dislike to spend much of their time. Hence, if they find a chamber that agrees with their ideas of cheerfulness, dust and rubbish, they immediately set their stakes and settle down in the most complacent manner imaginable. Of course the girls don't want these crawling, buzzing things for their companions, and they will readily see the force of our argument in relation to having their surroundings, neat, cheerful and beautiful.

If your window has the disadvantage of opening out upon the roof of a lower story, it may be readily turned to such advantage that the *original* unsightly appearance will be lost sight of altogether. The roof will serve for a capital stand to set house plants upon, or a long narrow box, the length of the window may be placed, planted with seeds of trailing vines, Morning Glory, Cypress, &c., which will make a nice and cheerful shade for the window, and help to keep the room cool all through the warm season, by training them upon cords or wires.—Little visitors will come too, in the morning, no less sweet than honey bees and humming birds. Will not some one keep us company in this experiment, this year?

There is a kind of moss to be found almost everywhere where moss abounds—we are not botanist enough to be able to give the name, but will try and describe it—which makes handsome frames, or even wreaths without pictures; it is formed like a miniature evergreen, being composed of little stalks from one to two inches long, which stalks have branches exactly resembling those of an evergreen tree. The stalks are tough, and may be separated readily without injuring their form, and tacked on to a piece of card-board the required size and shape, with a needle and thread. This will pay one for the time spent upon it, as the moss does not crumble easily, and may be kept a year at least without any difficulty, and retains almost the same color as when conveyed from its native soil. Moss birds and butterflies also may be formed by cutting the shape required from cardboard, and sewing the moss on it, selecting the finer fibres for this purpose. Gilt spangles may be added, especially appropriate for butterflies' wings; these placed in proper positions on the wall, near the wreaths or picture frames, and beyond the reach of curious hands, will bear inspection at a distance very well. C. M. S.

Every one of us may call upon God in a filial manner, as if He were his own, while a whole universe cries before him. Ah, else we were miserable. We are one in God.

For the Ohio Farmer and Cultivator.

BOILED WHEAT.

It is strange that intelligent men and women pay so little attention to healthy diet. Fashion dictates, and deluded, weak-minded persons would rather be out of the world than out of fashion. I suppose every body knows it is not fashionable to use boiled wheat, for I will venture to say that one-fourth of the civilized world has never seen this article used on the table. Life is wasted away with fine bread, toasts and puddings, and finally when it too late, hypophosphite is recommended to restore health and strength. All this trouble would be unnecessary if we would use plenty of boiled wheat.

Some persons bear acquaintance, and after you once know them fully you always love them; so it is with boiled wheat, after you once learn to eat it, you always like it. My husband's eyes always twinkle and look bright, when he sees the above named article on the table, and he says when through eating, "My, MARIE, what a good healthy meal this was; have it oftener, dear, and plenty of it."

Perhaps not every farmer's wife knows how to prepare this healthy dish. The wheat should be cracked in a mill. Take one quart and put into half a pot of warm water and let it stand upon the stove several hours, then boil it slowly and stir it occasionally till it becomes thick; put in a handful of salt. For children it can be used with milk. If left standing till cool it is very nice to cut it in slices and use with cream and sugar, or fry it like mush,—the last mentioned I prefer for general use, but it can be prepared in various ways.

Almost every mother knows how small children suffer with summer complaint; I learned my babe to eat boiled wheat when only a year old, and I thought it almost a cure for this disease, and it always makes her good natured. So much do I notice the good effect that I prefer giving her boiled wheat instead of severer treatment, to make her a good little girl. I used to be very nervous—my physician said that my main diet must be boiled wheat; and I have become entirely rid of that weakness. I consider it equal in taste to boiled rice and a healthier diet; and by experience I know its constant use would save many big doctor's bills.

FARMER'S LITTLE WIFE.

Peace is usually found in the line of duty.

CONVENIENCES FOR WOMEN.

It is lamentably true as, far as my observation extends, that farmers do not give sufficient attention to this matter. Most of them no doubt, come short, not for the want of sympathy and affection, but from not properly weighing the *real necessity* of having every thing convenient for doing the work in the house. There is a class of farmers (small, I trust) who do not appear to think that the house-wife's duties are laborious or worthy of a thought. She may toil on her weary round day after day, and if premature death does not relieve her, insanity often confines her to the mad house, where more farmer's wives are found than those of any other calling. This is a startling fact verified by the reports of our insane asylums. I do not see how we are to account for it, unless we seek for the cause in the unceasing drudgery, and want of proper sympathy from those who at the marriage altar vowed before God to give it. It is a difficult thing to reach the feelings of a man who can day after day see, if he would, the sure wearing out of all cheerfulness, all elasticity of mind and body, and finally all hope dying before his very eyes.

I will venture to name the proper location and arrangements of the kitchen as being first and foremost among the real necessities of every farmer's wife. It is here most of her work is to be done, and its relative position in reference to the rest or the house should be carefully arranged so as to save as many steps as possible. This is often overlooked in the construction of our farm houses. I know of several houses where stairs of one or two steps are to be gone up or down as you pass to or from other rooms in the house. This is a very serious defect, and should never be tolerated. The kitchen should be well lighted, plenty of sunshine admitted, and the best of ventilation secured. Much is said about ventilation, now-a-days, and if there is one place requiring it more than another, it is the kitchen. The fumes of cooking and all disagreeable odors that at times are liable to be there should find a ready exit, while the sunshine will not only tend to purify the atmosphere but impart a cheerful aspect to the apartment.

Then again the kitchen should have wells and cisterns of water at hand. No running to some distant well or spring for that indispensable article, as I have known some women to have to do, in storm as well as sunshine. How

many have left a heated room in a flowing perspiration for a pail of water, and taken a cold that eventuated in sickness, and quite often death, none can tell! We cannot deny the fact the number is very great. Pantries, stoves or ranges, dressers and milkroom (if a dairy farm) should be so located that not one unnecessary step shall be required in the daily household work.

This much in regard to the house arrangements. But this is not all. When you have done all this, the farmer is not to consider his whole duty accomplished by any means. Of what avail is it for the wife to have all the conveniences for doing her work we have enumerated, if the husband is habitually irregular at his meals. I have known men so habitually irregular in coming to their meals that no one could tell when to look for them. The consequence is very serious to the wife, and in some measure serious to the cooking. The work is delayed and the food, if prepared in season, is necessarily injured. Every well regulated family must be governed by uniform rules, so far as the various duties of the household are concerned. Uniform hours for the meals is the most important rule for the comfort of the housekeeper. The farmer can comform to these rules ninety-nine times in a hundred without any detriment to his own work out of doors.

Every farm house should be provided with a scraper, foot mat and old broom at the door for cleaning the boots before entering the house.—A pair of slippers for master and man should also be at hand, and each learn the luxury of the change—if not already learned—even for a few minutes, of an easy slipper in the place of a heavy boot, that will leave more or less dust behind on either the carpet or the paint. The man who has an eye to these, what some would term insignificant little things, will not stop here, but will ever be on the alert to manifest a helpfulness about household work.—*Cor. N. E. Farmer.*

Eyes.—A beautiful eye makes silence eloquent; a kind eye makes contradiction an assent; an enraged eye makes beauty deformed. The eye speaks a language in which there can be no deceit; nor can a skilful observer be imposed upon by looks, even among courtiers of women.

It is reported that a patent has been obtained for a newly-invented machine to make haste.

For the Ohio Farmer and Cultivator.

AIR---PURE AND IMPURE.

"Facts in nature are the expression of the Divine will in the government of the physical world." The universe of matter is made up of facts, which observed, traced out, and arranged, lead us to the knowledge of certain laws and forces which proceed directly from the hand of God. The observation of facts forms but the foundation of science, and science is developed by tracing these facts through all their numerous and various relations. To assert that sunshine and rain are essential to animal and vegetable life, is to assert a fact patent to all, but who is the wiser for the asseveration?

The bare mention of the *fact* that the "cellar kitchen is a musty cavern, not fit for man or beast," and the reference to some of the evils resulting from its occupancy, induces the spirit of inquiry in regard to the whys and the wherefores, which "Sun Bonnet" is reprehensible for omitting. The omission involves the knowledge to which all other matters are subordinate, the knowledge of life and health; since these are the first of all blessings, to maintain them is the first of duties; and to discharge these duties faithfully and intelligently, a knowledge of their conditions should be the first of all mental requirements. The influence upon the mind of the individual is measured by the value of the information placed before him To convince a man that health is necessary to all the duties of life as well as its pleasures, and that the "crime of squandering it is only equal to its folly," is not enough; he must be taught the primary laws relating to the great work to be done.

The evils encountered in the basement of our churches and dwellings, originate from the air. Atmospheric air, is a compound substance or fluid which surrounds the earth to a distance of about fifty miles; it exists in ever substance and enters the minutest pores. "It is impossible to contemplate the wonderful properties of the atmosphere without a feeling of profound amazement. When we glance at its deep mysteries, those intimate relations to life which have been disclosed to modern science; when we consider that the vegetable kingdom not only has the same chemical properties as the air but in its mass is actually derived from it; that the whole architecture and physiology of trees, shrubs and plants are conformed to atmospheric nutrition, so that in literal truth the forests

are but embodied and solidified air, the subject rises to a still higher interest. And more startling yet is the surprise when we recollect that the materials of our own bodily structure derived from vegetation, have the same atmospheric origin; that active life, the vital union of body and spirit, and all the powers and susceptibility of our earthly being are only maintained by the action of air in our systems; air which we inhale incessantly day and night from birth to death."

This singular fluid, which surrounds us on all sides like a vast ocean—atmospheric air, consists of four substances, a pair of elements, nitrogen and oxygen, and a pair of compounds, carbonic acid gas and vapor of water, with a small proportion of ammonia, &c. By analysis the air contains 32 parts oxygen to 68 of nitrogen. The nitrogen is lighter than the oxygen, and the vapor of water is lighter than either, while the carbonic acid is half as heavy again as the air itself.

Nitrogen is a negative substance, the office of which seems to be to act as a diluent of oxygen. An animal soon dies in an atmosphere of nitrogen, not from poison, for it is not poisonous, but for the want of that substance which supports combustion, or in other words respiration. It properly tempers the other ingredients of the atmosphere. It passes out of the body as it enters it, that is, without undergoing any change.

Oxygen, says the chemist, is the most important and widely diffused of the elements; it is the ever laboring, tireless Hercules of the atmosphere. It is not only the active agent in breathing, but without its aid combustion would cease. It is on account of what it does in the system that we respire the atmosphere. It enters the lungs through the windpipe and bronchial tubes or air passages. It fills and distends the numberless little cavities or air cells, which are enclosed by membranes and overspread with a network of capillary blood vessels. Oxygen passes through the delicate membranes, and enters the blood, giving it its bright crimson color. It is estimated that the lungs contain, on an average, 220 cubic inches of air, with an inner membrane surface of 440 square feet, nearly 30 times greater than the whole exterior of the body. This extended surface brings each minute part of the living fabric in direct communication with the external air, that it may receive from it the agent (oxygen) upon which it immediately depends for the performance of its vital office. If man attempts to breathe less oxygen than the air supplies, the result is a mental and physical depression. If pure oxygen is respired, the excess of vital action produces fever and death. If a current of this element, flowing toward a limb, a muscle, or the brain, be arrested, those parts lose their power of action. However, we must not dwell longer upon the interesting facts connected with this all-powerful agent, but proceed to the third ingredient of the atmospheric air—

Moisture; this is derived from evaporation upon the earth's surface. The quantity of moisture which the air holds depends upon its temperature, hence it is fluctuating. As the temperature is elevated the capacity for moisture is increased. After the air has imbibed its due quantity of vapor at a given temperature, it is saturated and it will receive no more, unless the heat be increased. If, when the air is saturates, its temperature falls, a portion of its moisture is precipitated, that is, it appears in drops of dew; this is termed its dew point. The air is always dampest near the surface of the earth. "Damp air, at the same temperature as dry air, has a powerful cooling effect, producing a peculiar penetrating chilling feeling, followed with paleness and shivering." The floor (and generally the wall) of a basement room is inevitably damp; the work of evaporation is constantly going on, and as this moisture dissipates the heat, the temperature becomes low; colds, disease and death follow as a consequent. The skin relieves the system of moisture, in two ways —by insensible perspiration, and by sweating. Under ordinary circumstances the loss is six times greater by the former than the latter process. The skin, as well as the lungs, is an organ of excretion; it contains "packed away some 28 miles of microscopic tubing, so arranged as to drain the system of its noxious matters, which if retained in the body, soon become injurious." The sudden change from a room properly conditioned and of a proper temperature, to a cold damp basement room, checks this cutaneous circulation, driving the blood inward upon the vital organs, resulting seriously, often fatally, proving beyond a question, that the "cellar kitchen is a musty concern, not fit for man or beast."

The fourth constant ingredient of the atmosphere is carbonic acid, a transparent, tasteless, inodorous gas. In the language of the chem-

ist, it takes no useful part in respiration, indeed it exists in the air in so small a proportion that its effects upon the system are inappreciable. Its sources are the combustion of burning bodies, fermentation and decay, the respiration of man and brutes, and it is also generated within the earth, and poured into the air in vast quantities. It may be set free more rapidly than it will dissolve away into air; than it sometimes accumulates in basements, cellars, wells, &c., and becomes dangerous. Carbonic acid when inhaled in its pure state produces suffocation, spasms, and the glottis of the throat is closed. When mixed with the air in small quantities, if it is taken into the lungs it acts as a rapid narcotic poison. The proportion necessary to produce a poisonous atmosphere is very small. Any cause which hinders the expulsion of this gas from the lungs, tends to accumulate it in the blood, and the injury is the same as though it were inhaled from the atmosphere. Air, whether pure or impure, is alike transparent and invisible. The causes of vitiation are also gradual and insidious in their action, so that their effects steal imperceptibly over the system. Cellar kitchens and cellars are usually converted into reservoirs of pernicious airs, by the reprehensible custom of using them as receptacles for the most perishable products. It is not necessary, however, that the lower spaces, of houses be filled with rotton garbage to generate foul air; the surface of the earth is filled with decomposable substances, and whenever air is confined in any spot in contact with the ground, or any changeable organic matter, it becomes saturated with various exhalations which are detrimental to health. "The noxious air generated in basements, cellars, and under floor spaces, reaches the inhabitants of upper apartments in so small quantities, that, instead of producing any marked and sudden process of disease, it operates rather as a steady tax upon their income of health; so uniform in its depressing effects as not to be appreciated," and hence seldom understood. MARY DAY.

"Dora, what did you do with that tallow Mr. Jones greased his boots with this morning?" "Please, marm, I baked the griddle cakes with it." "You did, eh? Confound you, I thought you had wasted it!"

Good women are the salt of the earth, sweet ones the sugar, pungent ones the pepper, biting ones the mustard, and sour ones the vinegar.

CHILBLAINS ON THE FEET.

Chilblains affect most commonly the heel and the toes, and, in their most ordinary form, present the appearance of inflammatory swellings of a lurid red or purplish color, which are accompanied with paroxysms of intense itching and pungent pain, the paroxysms at times being almost intolerable. When chilblains are neglected or improperly managed, the redness becomes deeper, blisters form, which being broken are followed by ulcers exceedingly troublesome and often slow to heal. In such severe cases the flesh or soft structures occasionally become mortified or gangrenous, and even the bones underneath have become diseased.

Chilblains are caused by sudden changes from excessive cold to too great heat. When the foot is exposed for a considerable length of time to a low temperature, the circulation of blood is diminished, and the surface, if not the whole structure, chilled, benumbed and stiffened. If this condition is suddenly arrested, as by bringing the feet quite close to a fire, it will be followed by a violent distention of the blood-vessels, causing weakness, increased insensibility or pain, and, in a word, a diseased condition of the skin and other structures which had been chilled by the cold. From this explanation of the cause of chilblains, the prudent among our readers may take a hint as to preventing them; and as an ounce of prevention is worth a pound of cure, they will be careful to avoid bringing their feet, when very cold or chilled, quite suddenly up to a fire or other source of heat. The change should be brought about by gradually, and better by stamping or otherwise exercising the feet, than by putting them at once close to the stove or fire.

As the vital force or contractibility of the blood-vessels of the chilled structure of heel and toes is very much diminished by one severe attack of chilblains, smaller exposures than that which first produced the disease will be sufficient to keep it up; and thus this troublesome and painful affection is often perpetuated during the whole of a winter. "Similar chilblains may attack the lobes of the ear, the nose, or the hands; being produced by the same cause, and amenable to the same treatment as when they appear on the feet." We have known a case in which the lobes of the ear were so severely affected that the person could not bear the pressure of his head on his pillow, and was obliged to use a circular cushion or pad around

the ear, in order to get any sleep while lying on his side.

Having thus stated the symptoms and explained the causes of chilblains, we come next to the treatment. And under this head, the most important thing is prevention by avoiding the causes, especially sudden changes from cold to heat. The feet, when chilled, should be brought to their normal state very slowly and gradually by exercise or rubbing, rather than by approach to the fire. But when swelling and redness are already present, gentle frictions with pulverized starch will give relief from the itching and smarting. So also will an ointment composed of two ounces of collodion, one ounce of Venice turpentine, and half an ounce of castor oil, well mixed. Spirits of turpentine afford relief to some, either alone or mixed with olive oil. So also will solutions of white vitriol, sal ammoniac, chloride of lime, sugar of lead, &c.; but no applicatian yet tried has proved so generally useful as petroleum or coal oil (kerosene.) Rub the swellings with it, and also keep it constantly applied by wetting the stocking with it over the swollen toes or heel. Some prefer to mix it with hartshorn—one part of hartshorn to two parts of the oil. Equal parts of kerosene and lime water have also been found useful.—*Dr. C. H. Cleveland.*

DIETING

Is usually considered to mean the same thing as a kind of starvation. The idea which the educated physician attaches to the term, is a judicious regulation of the quantity and quality of the food, according to the circumstances of each case. A healthy man may diet himself in order to keep well; an invalid may diet himself with a view to the recovery of his health; yet the things eaten by the two will widely differ in their nature, bulk, and mode of preparation. A vast multitude are suffering hourly by the horrors of dyspepsia; no two are precisely alike in all points, since there is an endless variety of combinations as to age, sex, occupation, air, exercise, mode of eating, sleeping, constitution, temperament, etc. Yet dyspepsia is always brought on by over and irregular eating, it could be banished from the world in a generation, if the children were educated to eat moderately, regularly and slowly; the parents who do this will do their offspring a higher good than by leaving them large fortunes which in three cases out of four, foster idleness, gluttony, and every evil thing. As the rich can get any thing to eat or drink when they want it, they, with indulged children, bring on dyspepsia by eating irregularly and without an appetite. The poor—those who have to work for a living—induce the horrible disease by eating too rapidly and at unseasonable hours; mainly by eating heartily at supper, and going to bed an hour or two afterward. In the heyday of youth and manly vigor, there may not not for a while be noticed any special ill effect from such a practice—in truth, it is at first inappreciable, but it is cumulative, and impossible not to manifest itself in due time. Infinite benevolence forgives a moral delinquency; but, omnipotent as he is, and loving toward all, it is not in the nature of his government of created things to work a miracle, to suspend a natural law, in order to shield one of his creatures from the legitimate effects of a violence offered the physical system by exceeses in eating, drinking or exercise.

Perhaps hearty suppers make more dyspeptics than any or all other causes combined. If dinner is at noon, nothing should be taken for supper but a single cup of weak tea, or other hot drink, and a piece of stale bread and butter. After forty years of age, those who live indoors, sedentary persons—that is, all who do not work with their hands as laborers—would do better not to take any supper at all. Half the time the sedentary, who eat at noon, do not feel hungry at supper; especially if they see nothing on the table but bread, and butter and tea. But nature is goaded to act against her instincts in almost every family in the nation by "relishes" being placed on the supper table in the shape of chipped beef, salt fish, cake, preserves, or other kinds of sweetmeat, and, before the person is aware, a hearty meal has been taken, resulting in present uncomfortableness, in disturbed sleep, in a weary waking in the morning, bad taste in the mouth, and little or no appetite for breakfast; all of which can be avoided by beginning early to eat habitually, according to the suggestions above made.—*Hall's Journal of Health.*

WIPING DISHES.—Much time is wasted by housekeepers in wiping their dishes. If properly washed and drained in a dry sink, with a cloth spread on the bottom, they look better than when wiped, besides the economy in saving time and labor.

FEMALE EDUCATION IN INDIA

"In India, the birth of a female, seldom occasions any greetings congratulatory to the mother—any kind of inquiries respecting the welfare of her new-born babe. It is the commonest expression on the lips of the men, "Cursed be the day when a female was born in my house!' * * * If the husband is obliged on any occasion, to refer to his wife, he will no speak of her in express and direct terms; he will say "a certain person," or "some individual." Hence it is that, in India, there are millions of mothers, but not a single wife in the noble and Christian sense of the term; millions of domestic drudges, but not a single guide or instructress of her own children. From the very entrance of a woman into the world, she is treated as a slave who has no personal liberty." This is the language of Dr. Duff, whose profound acquaintance with Indian subjects no one will call in question. Mr. Long, a Church missionary at Calcutta, says of the time when the First European missionaries went out to India:—"A proposal to teach women to read would have been regarded in the same light as if it had been suggested in London to teach monkeys in Hellah's system of singing." An intelligent Hindoo, in a paper read at Calcutta, in 1839, says:—"Woman leads indeed, a wretched life in this country. Penned up in her eternal prison-house, she is doomed to pass her days in misery and confinement. Condemned to moulder away her fair form, which is all delicacy, under one cheerless scene, and among the self-same objects that greeted her eye when she first saw light, she is sentenced to perform all the degrading offices of cook and scullion at once. Her occupations during the day are confined to the low menial. * * * The Hindoo men suppose the women were only born to minister to their comforts and luxuries. * * * The husbands look upon their wives as household slaves and treat them with a degree of superciliousness which even the Sultan of the Turkistan does not show toward his meanest serf. * * * The only ambition which they (the women) seem to be actuated by is to gain the name of a good cook; and, indeed she is looked upon, in the limited circle in which she moves, as a woman of no ordinary accomplishments. They are entirely destitute of all those refined intellectual attainments which render women doubly amiable," etc. Another Hindoo, a Brahmin, in 1847, wrote thus:—"I cannot refrain from bursting into tears when I reflect on the condition in which my country-women are sunk, and the brutal treatment they receive at the hands of their husbands!" He says that when a Hindoo marries he rejoices, because he has some one "to discharge the duties of a sweeper, a cook, a scullion, and a water bearer." With reference to their education, he says, women "are cruelly prohibited, by their ill-judging parents and guardians, from cultivating their mental faculties, under the false impression that, in the event of their gaining acquaintance with letters, they will lose their husbands, or find opportunity to carry on amorous commerce with foreign lovers by means of written communications." He proceeds to show that even the great men will not educate the female members of their families, and that woman, in India, is an ignorant slave and a drudge.

A Food for Delicate Stomachs.—Some persons cannot bear grease, to whom I would recommend the following plan: Melt about two ounces of lard, dripping or "rendered fat," and when liquid rub into it about as much oatmeal as to make a paste. While you are doing this, boil four or five quarts of bran stock or barley broth, into which two or three onions have been sliced. Add a little of the hot stock to the paste to thin it—this should be done at first only a spoonful at a time—and when thinned put it into your boiler, add pepper, salt, a little spice if you have it, and any leavings of food you happen to have, whether bread, meat or vegetables. In an hour you will have a good thick soup with no grease, fragrant, and fit for the most delicate appetite.

How to Teach Canaries.—Canaries may be taught to sing entire tunes by means of a flageolet or bird organ, in the following manner: In ten or twelve days, when he begins to feed himself, or sooner if he begins to sing, let his cage be covered with a thin linen cloth eight days, then take the instrument and play one tune five or six times a day for fifteen days, then remove the linen cloth and substitute a green or red one of a thick material. He must remain covered up in this way until he is perfect in the air you wish him to learn. During this time it is best to put in his feed at night, that his attention be not divided. The organ should be sweet toned, as they copy with exactness. Some learn in two, others in six months

The Dairyman's Department.

CHEESE DAIRYING IN OHIO.

Geauga county, Ohio, is noted throughout the West as producing a very fine quality of cheese. It will be remembered, at the last State Cheese Convention, in this city, Mr. BUDLONG, of the firm of BUDLONG & STOKES, extensive cheese merchants in New York, affirmed that Ohio could and did produce cheese of as fine flavor and quality as the best districts in New York. Some of the New York dairymen doubted this statement, but it appeared subsequently, that the sales from certain factories in Ohio compare favorably with those of our best factories in Oneida. During the past summer we had an opportunity of testing some of the Ohio cheese and we must confess its quality was, in every respect, first class. Before the introduction of the factory system, Ohio cheese was was always quoted in the New York markets at two or three cents less than our State dairies, but after the introductions of factories the quotations of the two classes of cheese did not show so much difference. There is doubtless great skill exercised among some of the cheese manufacturers of Ohio, and a persistent determination on their part to equal if not excel New York Manufacturers.

Geauga county it is said, contains eighteen cheese factories, which in the aggregate receive the milk from fourteen thousand cows. On the assumption that each cow gives an average annual yield of 400 pounds of cheese, the amount made at the factories alone in this county would reach an annual product of five millions six hundred thousand pounds. As Geauga county is the great cheese producing county of Ohio, it may not be uninteresting to dairymen to learn something of its situation and adaptability for dairy farming. A correspondent of the Cleveland *Herald* gives considerable information in regard to this region, a portion of which we condense, together with matter obtained from other sources.

The county contains only 400 square miles, yet in 1861 it produced fully one fifth of all the cheese made in the State. The soil and climate are emidently adapted as a dairy region. It is well wooded and well watered. In some sections the land is rolling, but on the whole comparatively level. Its mean altitude is 640 feet higher than Lake Erie, or 1200 above tide water, and there is but little land in the whole county, but can be turned to agricultural account. Its proximity to the lake gives it an elevated mean temperature, the annual range being about 90 degs., or an average from the highest heat in summer to the greatest cold in winter. The annual rain fall of the county exceeds that of any part of the State, being nearly 50 inches, while the mean for the whole State 42¼ inches. The lowest rain fall for the last 10 years was 43¼ inches, and the highest during that time was in the year ending Aug. 1st, 1865, 62¼ inches. The county is the source of three rivers, the Grand, Cuyahoga and Chagrin.

The soil is a "drift deposit," the surface of which has been changed chemically and mechanically, by the long continued actions of the elements, and mixed with the debris of animal and vegeable remains. It presents, in different localities, all the varied aspects of the original materials of which it is composed, being in some places sandy, in others gravelly or clayey, with clay of a yellowish cast largely predominating over the others, giving to the soil a decidedly clayey character, both in tenacity and color. It is well supplied with these mineral elements in a more or less soluble condition, so necessary to the growth, and perfection of the grasses, and at the same time being a good absorbent and retentive of moisture.

All these facts show that this section, like the central counties of New York, is peculiarly adapted to grazing, and we have no doubt but that as good a quality of milk can be produced in such a section as here. And with good milk it only rests with the cheese manufacturer to determine the character or grade of that product.

There is one feature connected with a region adapted to dairying, which differs from that where other branches of farming are conducted. The lands must have plenty of running water—located within the rain belts—so that by frequent showers it can escape drouth, and the soil, also must be of a character to hold grasses permanently.

It is now pretty well understood that grasses which spring up spontaneously in the soil of a good dairy region, are the most nutritious, and from which a better character of milk may be obtained than from those distinguished as the cultivated grasses. Of the 256,000 acres of which the county is made up 160,000 are in

pasture and meadow, and 30,000 under the plow. The factory system of cheese making has worked great changes in improving the flavor and quality of cheese in Ohio, and in this respect the system has been more advantageous and wrought greater changes than with us, since cheese-making was not so well understood as in the old dairy districts of New York.

The Ohio cheese this year has not, as formerly, been brought into the New York markets, but has been all or nearly all used to supply the western trade. We have not the prices which their best fancy cheese has brought, but, from occasional reports, judge that it has not fallen behind ours; and, perhaps, may have run higher, as much of our cheese has been bought by western dealers, thus giving an advantage at least of something on the cost of transportation.

We have an appointment in January to deliver the annual address before the Ohio State Cheese Manufacturers' Association at Cleveland, and hope at that time to collect facts which will be of interest to the dairymen of New York. The *Herald* gives the several factories in Geauga county as follows:

Of these L. J. RANDALL has three, one in Chardon, one in Burton and one in Montville; BUDLONG & STOKES have two, one in Chardon and one in Parkman; F. J. SMITH, one in Thompson; Mr. LANGSTON, one in Hamden; CHASE & ARMSTRONG, one in East Claridon; A. BARTLETT, one in Munson; L. BARTLETT, one in Chester; S. BAKER and S. FREEMAN, *each*, one in Newbury; D. L. POPE, one in Troy; R. HOOD, one in Auburn; E. RICHARDS, and E. STANHOPE, *each* one in Bainbridge, and BURT & ARMSTRONG, one in HUNTSBURG. The milk is either bought by the gallon or worked up and marketed at a certain per cent.—X. A. WILLARD, *in Utica Herald.*

TAKE CARE OF THE CALVES.

A matter which is easily done, but generally neglected. The calves are tender innocent things, and are sure to be pushed about if left with the herd. The barnyard is a bad spot for this, especially in the cold days, when the cows are disposed to be "ugly." Then the calf is apt to fare the worst for it. The cold then cramps it up and enfeebles it (it is its first winter), and it will soon be overcome and done for. This is the case, shall we say, generally? Claves suffer more than any other part of the stock, unless it is the decrepit sheep.

Evidently it is not the place to keep calves with the cows and general stock of the yard. They must have a place by themselves; be fed alone, together; be kept together. Then they are free, and there is no fear to prey upon them. They are happy and independent, and the good treatment will show out of their eyes, and in the young cow-breath they will exhibit. They will grow—winter will be but a continuance of summer in this respect—which we all know is not the case generally. The aim generally is, to *keep* them through the winter—not grow them during that period, but save them through till summer; then the grass will make them grow. Thus we depend upon the summer for the growth of our stock—one of the greatest fallacies in the world: fatal, injurious, suicidal, both to man and beast. The winter should not interfere with the growth of our stock—particularly with the calves, which are more susceptible to draw backs.

A calf wants tender but nutritious food. Young grass, well-seasoned, makes the best hay. Corn stalks well cut up, are reliable and good; but the stalks should be green cured—fodder-corn with fine stems. The two mixed are excellent, though either will do, hay being the best for a general or regular feed. A dusting of oatmeal is a wonderful helper—but is not needed where the calves are healthy and hardy, and open the winter in that condition. The oat is preferable to corn—indeed to any grain for young stock. It is the muscle-forming food, and adds to the *growth*, not the fattening of stock. Growth is what is wanted in calves, and not fat, or just enough for healthy support.

Young hay then (timothy best), mixed or not, with corn-stalks, tender and young with a sprinkling of oatmeal. Other grain will do, but is not so good; corn is perhaps the most objectionable—but is most used, because the most available, being in the West omnipresent. This however should not tempt; for it is of great importance that we raise our young stock in a careful manner, as what they lose in growing time can never be replenished. That is gone to the detriment of the cow or horse; or whatever it may be.

Besides the feed, there must be warm quarters for the calves, or they will suffer, and that materially. As has been said, they are not used to the winter; they are tender; they have not

the vigor of constitution or digestion of older cattle; they are helpless and simple, and they need nursing. Warm quarters therefore are a great requisite for these tender things; freedom from the assaults of the stock of the yard, another; good tender food the third; and lastly, regular feed—and that oftener than with old stock. This in consequence, partly of habit and partly of a lack of disposing of a proportional amount of food in comparison with cows.

SAWDUST AS BEDDING.

Some of our friends are in the habit of using sawdust as bedding. It will do for that, and as an absorbent of liquid manures it may be useful, but it is poor stuff on land. It contains an infinitesimal quantity of nitrogen in itself, and of mineral matter, though some have thought that it would have good effects as manure on account of the solvent action of its carbonic action on the mineral constituents of the soil—Mr. Lawes tried sawdust on his grass plots at Rothamstead at the rate of 2,000 lbs. annually, but it yielded an average annual produce of 3½ hundred pounds *less* hay than the *unmanured* land alongside.

Where 2,000 lbs, of sawdust were applied with ammoniacal salts, there were only 6 lbs. an acre per annum more grass than where the same sort and quantity of ammoniacal salts were applied alone. Where the sawdust was used in a mixture with both ammoniacal salts and mineral manure the yield per annum was about ¾ of a hundred weight less than where the same salts were used without the sawdust The ton of sawdust per acre, and per annum was practically of no avail as a manure.

As a mere absorbent of liquids it is worth something, as it enables us to save them when they might otherwise be lost, but sand is so vastly better that if you can get that we consider it far preferable, especially if your land, or the soil on which you propose to apply the manure is inclined to be stiff and heavy. We like sand, and don't like sawdust if we can get anything better.—*Mass Ploughman.*

A CALF needs feed oftener, as the young of all animals do. But if the feed is oftener, get up a regularity in that, at least as the winter progresses. Thus there will be but little check in the growth of a calf during the winter. And here is where the great gain is. In summer pasture has its effect, on all alike. It is the winter that the successful breeder relies upon.

Rural Miscellany.

Written for the Ohio Farmer.

THE LABOR QUESTION.

EIGHT HOURS FOR A DAY'S WORK.

Are workers getting rich too fast, or people hurting themselves by working ten hours?—What then—obviously it means the same pay for less work—a strike for higher wages, asking the law to legalize said strike. If beyond this it has any animus it is in downright, organized, poorly disguised hostility to labor as an evil to be reduced to the lowest possible quantity. In this it levels downwards. Its practical drift is something for nothing, a most exquisite effort to rise by tugging at one's boot straps.

Day time, averaging twelve hours, was no doubt the primal assignment of time for labor. What part of that twelve hours do I as a workman really need, if any, and what should you have as my employer? The true day's work must be graduated according to obvious needs and circumstances, but less than ten hours on an average can scarcely be called a *day's* work less than ten hours seems trifling with general regular business, an insult to daylight and manhood, a premium on idling and waste and childishness.

Is it not scriptural and manly "to work while the day lasts," to grapple with work and business and "whatsoever our hands find to do, do it with our might?" When and where was anything done by beginning late and quitting early dragging yourself along to it and then stealing off as if ashamed of your task? To every thoughtful mind there is infinitely the greater portion of the great work set before us yet undone. Therefore let us be men;—men for work and work for men. Let children do the amusement—sturdy, well-developed manhood finds in whatever needful labor or duty, ample recreation. Be manhood and strength and accomplishment, our standard.

Nevertheless such talk takes hugely with dainty, dapper, degenerate Americans. In good sooth, considering the present and possible triumphs of art, is not work a humbug? Alas! that machinery must be tended, and is found to need sound minds in sound bodies.

But the writer has often thought trying to get work done by the day was a humbug. As a potent counterblast, why should not employ-

ers reduce to a jobbing standard their work, or pay by the hour and not by the day? Somewhere let the line be drawn between working and loafing for wages; no work, no pay. Who will get up the best, most reliable standard book or tables for all trades to consult in such cases? How much ground should a man ordinarily plow, plant, hoe or harvest per day? how many horse shoes should be made or set? how many plows, hoes, axes, handles, spokes, hubs or doors per hour or per diem, shall be given and taken as a fair equivalent? Here is common ground that interests employers and employees alike—it would seem the next thing to having standard weights and measures for any use or purpose. Now all is left to hearsay and tradition laziness on the one hand, possibly, and extortion on the other. Labor is the great unwritten epic, the unrevealed glory yet in store for some favored nation of men and women. He is best who with least *does* most and best. "To him that overcometh it shall be given." To look around and see the hatred of labor, the childish prodigality, the low-lived, barbarian display, the fashionable style, sensuality and worthlessness that abound, bodes ill for our country. It bespeaks that second childhood which immediately precedes dissolution. P.

WHAT MAKES A FARMER.

[Report of a lecture by Prof. CHADBOURNE of Mass.

Prof. Paul A. Chadbourne of Williams College, and member of the Senate, delivered an exceedingly able and instructive lecture, in the evening, upon

"AGRICULTURE AS AN EMPLOYMENT, ITS DIGNITY AND REQUIREMENTS."

After alluding to the object of agriculture, the speaker said the fruits of the earth kept pace in their improvement with the improvement of the human race. They were not created to grow wild but to be cultivated, and man was made to cultivate them. Thus it was that we find this great agricultural truth revealed in the very nature of those plants and in the delight of man in their cultivation, which delight increases just in proportion as he rises from the plane of civilization. The more man becomes cultivated, the greater the reason that agriculture should be the necessary employment of a portion of civilized man, because it meets his necessities and capacities. The dignity of agriculture, he said, was being daily vindicated. It was God-appointed, and there was no other secular business enjoined upon man. The inherent dignity of the occupation is seen also in the fact that all may engage in it without any feeling of humiliation. The high, the noble, and the brave have in the cultivation of the earth a sure employment which the whole world regards as honorable.

Another ground of its inherent dignity is that it is the foundation of all other pursuits. The support of life, food and raiment are the first great necessities of the race. These come from the earth, and our railroads thunder along with their loaded trains—with products of the earth. The grain of the North, the cotton and rice of the South, and the fruits and spices of these lands, were the products of the labor of man. Without agriculture civilization is impossible. The Greenlanders are Christainzed, but not civilized, and never can be where they live, and although their country possesses the elements of wealth, the barren mountains and the eternal glaciers forbid the cultivation of the earth, while the humanizing influence of luxuriant crops and of labor on the soil is wanting.

It is only the riches of the soil that gives actual strength and resources to any people. That which grows is something real. It was not money alone that carried us through the struggles of the last four years, but it was the resources and power of the country. It was the boast of the old Roman General that he could raise an army by stamping his foot upon the earth. Americans stamped their feet upon the soil, and not only raised armies, such as Rome never saw, but clothed and fed them, and amid the din of arms sent millions of bushels across the water to feed hungry Englishmen. Agriculture has proved our profit in time of war.

Another reason for the dignity of agriculture was that it gives an independent business to each man who engages in it. The duties of the farmer were then contrasted with those of the mechanic and merchant. Agriculture requires thought and forethought, observation and experience. Of all men the farmer is the most independent. He can live on his own products, he is his master, and success or failure are not his employers. These he considered as of prime importance to the true dignity of man, and these are among the grand elements of the dignity of agriculture. But notwithstanding all

these sources of dignity, farming does not hold the rank it ought to hold.

The disposition among farmers to quit their calling for professional pursuits was censured, and reasons were advanced why this practice should be discarded and how agriculture might be elevated as a proud pursuit.

It is not the soil alone that demands the farmer's study, but every plant that it produces and every insect that preys upon his harvest, that ought to be investigated. Scientific knowledge in farming would be of incalculable importance to the farmer.

He also urged as another source of mental cultivation the study of the beautiful. Beauty was found in creation as well as utility. Creation is full of the beautiful. Agriculture, then, is a pursuit which is educational in its nature, and demands education for its successful prosecution.

Agriculture, must be reduced to a science in order to raise a class of highly educated farmers. But so long as farmers deride science and learning they must not complain if their business takes a low rank. It is the brain, not the hand that gives rank to man, or rather the brain and hand combined.—*Mass. Ploughman.*

INFLUENCE OF WINTER UPON AGRICULTURE.

Cold, rugged, stern, stormy winter is, in one sense, the handmaid of agriculture. The earth needs rest, and she will everywhere have it in some form. In northern latitudes the frosts of winter compel rest. Frosts act mechanically in the disintegration of the soil, riving asunder not only large masses, but minuter particles, thus creating more surfaces to be chemically acted upon. Without frost many soils would *fleet* down like heavy bread, so as to be impervious to light and air, and hence be comparatively barren. Freezing does not sensibly contract or expand the stones, but the surrounding soil containing more or less moisture, which freezes or expands, and thus drives the particles asunder, and it is said the ground heaves or is "oven." The stone, if in sight, appears to have settled down. When the milder temperature dissolves the frost, the particles do not fall back precisely as before, but lie loosely like unpacked stones or brick. The surfaces and subsoil, to some depth, are light, as is said; and air and light permeate through the pores or spaces, thus effecting by natural mechanics, what is done more completely with the plow or hoe. The influence of frost upon the forest trees is not very well understood. It is a well known fact that the sap of the maple flows more freely after a frost. It may have an important influence in its circulation.

But leaving for the present the subject of speculation, let me consider the agricultural bearing of the winter upon the farmer. It is his time of recreation and rest. The cities pour out their wealthy and professional men to rusticate and rest in "summer's sultry heat." But the farmer must go forth daily to his task under the broiling heat of July or August. He must "bear the burden and heat of the day" to gather in his early harvest. The dust and lassitude of "dog days" he cannot shun if he would. But winter brings a temporary release from the intense application of "seed time and harvest." He now reads and reflects. He digests the past and plans for the future. This success and that failure come up in review. No profession or business calls for more extensive reading, reflection, and ingenious planning, than farming. The long winter evenings, when the outward pressure is not so great, gives an excellent opportunity to invigorate himself physically and mentally for a "new campaign." The health and increasing intelligence of the agricultural community, shows plainly the good influence of winter upon farmers, and let me add that the rapid introduction of agricultural machinery, while it relieves the farmer from that physical exhaustion his calling formerly rendered necessary, now permit him to use his mind more. When his day's labor is done, he is not too jaded to read and think.—*Cor. Boston Cultivator.*

CLASSICAL vs. SCIENTIFIC EDUCATION.

Among the gentlemen summoned before the parliamentary commission for investigating the condition, etc., of certain schools and colleges in England, was Mr. Farraday, who, on the question as to the comparative value of the classical and scientific system of education, said:

"Up to this very day there come to me persons of good education, men and women quite fit for all that you can expect from education; they come to me and they talk to me about things that belong to natural science; about mesmerism, table turning, flying through the air, about the laws of gravity; they come to me to

ask questions, and they insist against me, who think I know a little of these laws, that I am wrong and they are right, in a manner which shows how little the ordinary course of education has taught such minds. Let them study natural things, and they will get an idea very different from that which they have obtained by such education.

I do not wonder at those who have not been educated at all, but such as I refer to say to me, 'I have felt it and done it and seen it, and though I have not flown through the air, I believe it.' Persons who have been fully educated according to the present system, come with the same propositions as the untaught, and stronger ones, because they have a stronger conviction that they are right. They are ignorant of their ignorance at the end of all that education. It happens even with men who are excellent mathematicians. * * * Who are the men whose powers are really developed?—Who are they who have made the electric telegraph, the steam engine and railroad? Are they the men who have been taught Latin and Greek? Were the Stephenses such? These men possessed that knowledge which habitually had been neglected and pushed down below.—It has only been those who, having a special inclination for this kind of knowledge, have forced themselves out of that ignorance by an education, and into a life of their own."

To winter bees well in our climate they should be kept in a room well secured against extreme cold, with good ventilation, but not a ray of light, occasionally a cellar may be found dry enough for the purpose, but generally a room above ground is the best for storing bees. If kept in comfortable quarters, bees may be fed daily if need be, as well as chickens or pigs.—*Cor. Northern (Wis) Farmer.*

NATURAL PHENOMENA.

THEIR CONNECTION WITH AGRICULTURE.

Man, though at the head of organized being, and though endowed with reason, yet is as progressive, when viewed through the race, as either plant or brute. In his lowest condition he is the wild savage, content with the vermin and roots he digs from the earth with his fingers, or with the very rudest tool; or rising he appropriates the spoils of the chase for food, clothes himself with skins, fabricates weapons, and builds huts; but only as he advances upward does he think of cultivating the soil for the sake of what his labor upon it can bring him. His first efforts in agriculture at once exalt him, and he leaves his nomadic habits in part for a settled habitation and a home. Once established, his observation expands, and he endeavors to propitiate the favor of the seasons in his notice of the natural phenomena by which he is visited.

The coming forth of the animals from their winter's sleep, the return of the birds, the blossoming of the early flowers, the leafing of the forests, all remind him that warmer sunshine and blander winds will work for his sake. Such data which have been noticed ages ago have been held in more or less veneration ever since. They can be proved to be reliable only by the closest and most constant observation. Such unremitting attention to the most minute particulars enables science to evolve from them principles of universal application, and help in some way, perhaps, to render the manual labor more facile by the faculties of the mind. And thus, in every part of agriculture, nature yields pliant facility to experiment, and to care and pains almost every desire of the human heart seems likely to be given freely and without stint.

It is affirmed that these notions, which are said to be current among the wild tribes of our own continent, and to which I have alluded as indications of the progress from the lowest condition of human life to a higher and better, can be made in some degree, our guides in the labors of the garden and the farm. The object of this essay is to ascertain, if possible, what reliable connection the phenomena of the seasons have with agricultural operations. I approach the subject with some hesitation, because it seems problematical whether we derive much knowledge of a positive character from the proverbial wisdom of the rudest forms of an occupation which demands for its fullest success the highest powers of the intellect.—*Agricultural Report.*

THE TANTALUS TRICK.—Let a person stand with his back and heels close to the wall, then place a dime on the floor at a little distance in front of him, and tell him he shall have the money if he can take it up without advancing his heels from the wall. It appears very easy to perform, but will be found to be impracticable.

The love lost by continued cooling, cannot always be regained by as persevering a warming

Rural Poetry.

For the Ohio Farmer and Cultivator.

DUST TO DUST.

BY EMMA TUTTLE.

When a human being dies.
We have aching hearts and sighs,
Quivering mouths and streaming eyes;
But Faith whispers soft replies
To our sobs, of melting skies,
Wherein lies a Faradise
Whose sweet beauty will surprise
Those who drop the mortal guise—
When a human being dies.

Yesternight my graceful pet
By Life's foeman, Death, was met,
And to-night my eyes are wet
With the tear-drops of regret.
I have stroked her jetty mane—
But I never can again—
I have loved her great brown eyes,
Like the dusk of tropic skies;
Her unfearing, fond caress
I shall ever, ever bless!
Laugh who will o'er such a corse,
I am weeping for my horse!

Under the wild cherry tree
She will never neigh for me,
But will moulder silently,
Dead for all eternity.
Faith can whisper nought to me,
Though I loved her tenderly;
She will never live again.
Silent dews and fretting rain
Soon will melt my beauty down
Into dust, all chill and brown,
Under the wild cherry tree.

When the glad Spring comes again,
And life leaps in every vein,
Under the wild cherry tree
Rich and dark the grass will be
Where she mouldered back to earth.
Loving is of little worth
In this changing world of ours;
I shall fear to love the flowers,
Breaking every one with pain
When the glad Spring comes again!

"Dust to dust" my little pet!
Would that you could love me yet!
But I never will forget,
Blessing through all coming days
All your playful, gentle ways,
Brightest of all glossy bays!
I have been your loving friend,
Loving to the weary end,
Stroking head and neck in pain,
Nursing you—alas, in vain!
You will never think of me,
Under the wild cherry tree;
But I never can forget!—
"Dust to dust," my little pet.

That life is long which answers life's great end.

OHIO FARMER.

Vol. XV--For 1866.

PUBLISHED AT CLEVELAND, O.

WM. B. FAIRCHILD,
General Editor and Publisher.

S. D. HARRIS,
Agricultural Editor

WEEKLY—Each No. containing Eight large Quarto Pages—giving 40 Double Columns per Week.

THE LARGEST

Agricultural & Family

Paper Published in the West.

DEVOTED TO

Agriculture,
Horticulture,
Sheep Husbandry,
Stock Raising,
Domestic Economy,
Choice Literature,
General News,
Wool Markets, Produce Markets, &c.

Terms for 1866.

A Single Copy	$2 50
Three Copies	6 75
Five Copies	11 00
Ten Copies	20 00

And an Extra Copy to the Agent forwarding a Club of Ten.

All Payments Strictly in Advance.

Ohio Cultivator.

Vol. XXII.--Monthly.

Thirty-two Double Column Pages per No. Made up of the choicest matter from the "OHIO FARMER." The CHEAPEST MONTHLY NOW PUBLISHED IN THIS COUNTRY.

Single Copy, 50 Cts.—$5.00 for 11 Copies. For either Publication address

OHIO FARMER,
CLEVELAND, O.